

# APEX<sup>®</sup>

ASSEMBLY & FABRICATION TOOLS

2018-2019

# TABLE OF CONTENTS

## THE APEX ADVANTAGE 4

### SCREWDRIVER BITS

PHILLIPS	9
MORTORQ®	12
SLOTTED	14
"TORX®"	17
TORX PLUS®	20
POZIDRIV®	21
SEL-O-FIT™	22
QUADREX®	22
FREARSON	23
SOCKET HEAD	25
SQUARE RECESS	28
TRIPLE SQUARE	29
TORQ SET®	30
TRI WING®	31
HI TORQUE	32
B.N.A.E.	32

### BIT HOLDERS, NUTSETTERS, HAND DRIVERS, & HEX ADAPTERS

BIT HOLDERS	34
NUTSETTERS	36
HAND DRIVERS	39
HEX ADAPTERS	39

### 1/4" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	44
METRIC SOCKETS AND UNIVERSAL WRENCHES	46
SPLINE AND TORX SOCKETS	58
EXTENSIONS AND ADAPTERS	50

### 3/8" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	51
METRIC SOCKETS AND UNIVERSAL WRENCHES	56
SPLINE AND TORX SOCKETS	60
EXTENSIONS AND ADAPTERS	60

### 1/2" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	63
METRIC SOCKETS AND UNIVERSAL WRENCHES	69
SPLINE AND TORX SOCKETS	75
EXTENSIONS AND ADAPTERS	76

### 5/8" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	78
METRIC SOCKETS AND UNIVERSAL WRENCHES	79
EXTENSIONS AND ADAPTERS	79

### 3/4" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	80
METRIC SOCKETS AND UNIVERSAL WRENCHES	81
EXTENSIONS AND ADAPTERS	82

### 1" DRIVE SOCKETS, EXTENSIONS, ADAPTERS, & UNIVERSAL WRENCHES

SAE SOCKETS AND UNIVERSAL WRENCHES	83
METRIC SOCKETS AND UNIVERSAL WRENCHES	84
EXTENSIONS AND ADAPTERS	85

### 1 1/2" DRIVE SOCKETS, SAE

SAE SOCKETS AND UNIVERSAL WRENCHES	85
------------------------------------	----

### u-GUARD & ANTI-MAR COVERED TOOLS

UGS TOOL SERIES	92
UGH TOOL SERIES	101

### CUSTOM SOLUTIONS

REVERSIBLE SOCKETS	107
TAP HOLDING SOCKETS	107
DRILL HOLDERS	108
#5 SPLINE DRIVE	108
BUDD WHEEL SOCKETS	109
SPARK PLUG SOCKETS	109
LUG NUT SOCKETS	110
DOUBLE ENDED BITS	110
MARKER SOCKETS	110
BALL END HEX BITS	112
BARBELL SOCKETS	113
COMBINATION SOCKETS	113
COUNTER-BORED TOOLS	115

### PART NUMBER INDEX 126



# QUICK REFERENCE GUIDE

<b><u>THE APEX ADVANTAGE</u></b>	<b>4</b>
<b><u>SCREWDRIVER BITS</u></b>	<b>8</b>
<b><u>BIT HOLDERS, NUTSETTERS, HAND DRIVERS, AND HEX ADAPTERS</u></b>	<b>33</b>
<b><u>1/4" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>43</b>
<b><u>3/8" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>50</b>
<b><u>1/2" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>62</b>
<b><u>5/8" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>78</b>
<b><u>3/4" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>80</b>
<b><u>1" DRIVE SOCKETS, EXTENSIONS, ADAPTERS,&amp; UNIVERSAL WRENCHES</u></b>	<b>83</b>
<b><u>1 1/2" DRIVE SOCKETS, SAE</u></b>	<b>85</b>
<b><u>u-GUARD &amp; ANTI-MAR COVERED TOOLS</u></b>	<b>86</b>
<b><u>CUSTOM SOLUTIONS</u></b>	<b>104</b>
<b><u>PART NUMBER INDEX</u></b>	<b>126</b>



# PREMIUM INDUSTRIAL-GRADE FASTENER DRIVE TOOLS

FROM MANUFACTURING TO CRITICAL REPAIR OPERATIONS,  
COMPANIES DEMAND DRIVE TOOLS THAT ARE

**HIGH PRECISION, RELIABLE, AND DURABLE.**

SIGNIFICANT COST SAVINGS AND PRODUCTIVITY ENHANCEMENTS CAN  
BE REALIZED BY USING SCREWDRIVER BITS, SOCKETS, AND UNIVERSAL  
WRENCHES THAT LAST LONGER, FIT BETTER, AND OFFER A SUPERIOR  
RETURN ON INVESTMENT.



## APEX: GLOBAL LEADER IN FASTENER DRIVE TOOLS SINCE 1933

Since 1933, APEX has been delivering high quality, robust solutions for both assembly and MRO applications. We take pride in our capability to provide customers with innovative, robust tools that increase productivity, operating efficiencies, and operator safety. APEX understands that it is all about durability and consistency. Hence our tools are designed to fit and perform better, and significantly last longer than competitive tools.

THE APEX LINE OF PRECISION  
MACHINED, INDUSTRIAL-  
GRADE FASTENER DRIVE TOOLS  
HAS EVOLVED INTO THE BRAND  
OF CHOICE FOR ALL LEADING  
ASSEMBLY AND MRO PLANTS  
AROUND THE WORLD.



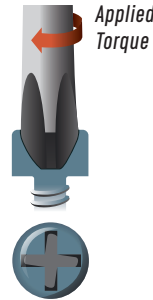
# THE APEX ADVANTAGE

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.

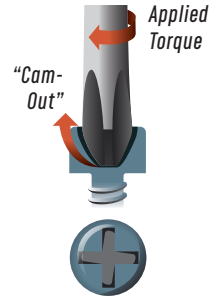
Almost all APEX tools are **manufactured in our state-of-the-art facility in Dayton, Ohio**. Our tools are machined, not forged, which produces consistent, precision fit tools that have the tightest tolerances for straightness and concentricity in the industry.

**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

Precision machined tools run true

Advanced engineering specifications lead to tighter tolerances

## 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 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.





## **HIGH-PRECISION SCREWDRIVER BITS: INSERT AND POWER DRIVE**

**// MANUFACTURED FROM  
PROPRIETARY INDUSTRIAL GRADE  
STEEL. CUTTING EDGE MACHINING  
PROCESS AND ADVANCED HEAT  
TREATMENT PROVIDES A BETTER,  
CONSISTENT FIT TO THE FASTENER  
AND YIELDS GREATER STRENGTH  
AND LONGER BIT LIFE.**



# INSERT AND POWER DRIVE BITS

## AVAILABLE FASTENER DRIVE STYLES:

- ⊕ Phillips®
- ⊕ Torx Plus® Tamper Resistant
- ⊕ B.N.A.E
- ⊕ MorTorq® Super
- ⊖ Slotted
- ⊕ Pozidriv®
- Socket Head
- ⊕ Tri-Wing®
- ⊕ Torx®
- ⊕ Sel-o-fit™
- Square Recess
- ⊖ Hi-Torque®
- ⊕ Torx Plus®
- ⊕ Quadrex®
- ⊕ Torq-Set®
- Triple Square
- ⊕ Torx® Tamper Resistant
- ⊕ Frearson
- ⊕ MorTorq®

## ⊕ PHILLIPS BITS

### 1/4" HEX INSERT BITS



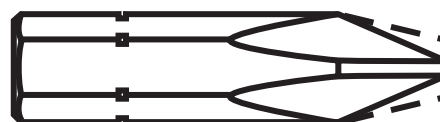
Part Number	Point Size	Overall Length		Bit Notes
		IN.	MM.	
440-1X	1	1	25	
440-1I	1	1	25	
440-115X	1	1 1/2	38	
440-12X	1	2	51	
440-125X	1	2 1/2	64	
440-13X	1	3	76	
440-2X	2	1	25	
440-2I	2	1	25	
440-2R	2	1	25	
440-215X	2	1 1/2	38	
440-22X	2	2	51	
440-225X	2	2 1/2	64	
440-23X	2	3	76	
440-24X	2	4	101	
440-255X	2	5 1/2	140	
440-26X	2	6	152	
440-27X	2	1	25	For Shallow Screw Recesses
440-3X	3	1	25	
440-3I	3	1	25	
440-3BNX	3	1 1/4	32	Large Body
440-3125X	3	1 1/4	32	
440-32X	3	2	51	
440-325X	3	2 1/2	64	
440-33X	3	3	76	
440-34X	3	4	101	
440-4X	4	1 5/16	33	

### 1/4" HEX INSERT BITS – ACR®



Part Number	Point Size	Overall Length		Bit Notes
		IN.	MM.	
440-1-ACR1-RX	1	1	25	
440-1-ACR1-DX	1	1	25	
440-1-ACR1X	1	1	25	
440-2-ACR2-RX	2	1	25	
440-2-ACR2-RI	2	1	25	
440-2-ACR2-DX	2	1	25	
440-2-ACR2X	2	1	25	
446-2-ACR2-DX	2	1	25	Limited Clearance
446-2-ACR2X	2	1	25	Limited Clearance
440-22-ACR2-RX	2	2	51	
440-22-ACR2-DX	2	2	51	
440-22-ACR2X	2	2	51	
440-3-ACR3-DX	3	1	25	
440-3-ACR3-RX	3	1	25	
440-3-ACR3X	3	1	25	

Part Number Suffix - R For removal  Part Number Suffix - D For driving  No Part Number Suffix For both removal and driving 



### ADVANTAGE OF 27 SERIES BITS:

**A**

27 Series bits are ideal for poorly recessed Phillips screws. A wider tip design fills out an inexact recess to make better contact.

## 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  
Suffix - R  
For removal



Part Number  
Suffix - D  
For driving



No Part  
Number Suffix  
For both removal and driving



## 5/16" HEX INSERT BITS

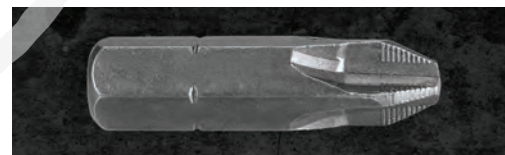


Part Number	Point Size	Overall Length		Bit Notes
		IN.	MM.	
480-1X	1	1 1/4	32	
480-2X	2	1 1/4	32	
480-2I	2	1 1/4	32	
480-22X	2	2	51	
480-225X	2	2 1/2	64	
480-24X	2	4	101	
480-3X	3	1 1/4	32	
480-3I	3	1 1/4	32	
480-325X	3	2 1/2	64	
480-34X	3	4	101	
480-4X	4	1 1/4	32	
480-4BNX	4	1 1/2	38	Large Body
480-425X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

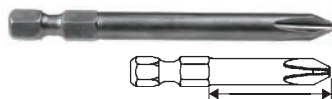


### ADVANTAGE OF APEX ACR® BITS:

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.



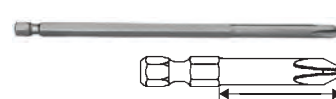
## 1/4" HEX POWER DRIVE



Part Number	Point Size	Overall Length IN. MM.	Body Dia. IN. MM.	Turned Length IN. MM.
4910-BX	0	3 1/2 89	1/8 3.2	2 3/4 70
4910-AX	0	2 3/4 70	1/8 3.2	2 51
4910-CX	0	6 152	1/8 3.2	2 51
4910X	0	1 15/16 49	1/8 3.2	1 1/4 32
491-AX	1	2 3/4 70	3/16 4.8	2 51
491-BX	1	3 1/2 89	3/16 4.8	2 3/4 70
491-CCX	1	6 152	3/16 4.8	5 1/4 133
491-CX	1	6 152	3/16 4.8	2 51
491X	1	1 15/16 49	3/16 4.8	2 32
492-200MM	2	7 13/16 200	1/4 6.4	7 178
492-27X	2	1 15/16 49	1/4 6.4	1 1/4 32
492-4X	2	4 102	1/4 6.4	3 1/4 83
492-A-27X*	2	2 3/4 70	1/4 6.4	2 51
492-AI	2	2 3/4 70	1/4 6.4	2 51
492-AX	2	2 3/4 70	1/4 6.4	2 51
492-B-27X*	2	3 1/2 89	1/4 6.4	2 3/4 70
492-BI	2	3 1/2 89	1/4 6.4	2 3/4 70
492-BX	2	3 1/2 89	1/4 6.4	2 3/4 70
492-C-27X*	2	6 152	1/4 6.4	2 51
492-CC-27X*	2	6 152	1/4 6.4	5 1/4 133
492-CCX	2	6 152	1/4 6.4	5 1/4 133
492-CI	2	6 152	1/4 6.4	2 51
492-CX	2	6 152	1/4 6.4	2 51
492I	2	1 15/16 49	1/4 6.4	1 1/4 32
492X	2	1 15/16 49	1/4 6.4	1 1/4 32
SD-1474-D	2	4 1/2 114	1/4 6.4	3 3/4 95
SD-1975-B	2	3 1/2 89	.151 3.8	2 3/4 70
SD-2052-10	2	10 254	9/32 7.1	9 229
SD-2052-8	2	8 203	9/32 7.1	7 178
SD-4429	2	1 15/16 49	.170 4.3	7/16 11
SD-4496-2	2	6 152	.120 3.0	2 3/4 70
SD-5206	2	6 152	.170 4.3	5 1/4 133
SD-5413	2	2 51	.170 4.3	7/16 11
4930-AX	3	2 3/4 70	1/4 6.4	2 51
4930-BX	3	3 1/2 89	1/4 6.4	2 3/4 70
4930-CCX	3	6 152	1/4 6.4	5 1/4 133
4930-CX	3	6 152	1/4 6.4	2 51
4930X	3	1 15/16 49	1/4 6.4	1 1/4 32
493-AI	3	2 3/4 70	5/16 7.9	1 3/4 44
493-AR	3	2 3/4 70	5/16 7.9	1 3/4 44
493-AX	3	2 3/4 70	5/16 7.9	1 3/4 44
493-BX	3	3 1/2 89	5/16 7.9	2 1/2 64
493-CX	3	6 152	5/16 7.9	5 127
493X	3	1 15/16 49	5/16 7.9	1 25
494X	4	1 15/16 49	3/8 9.5	1 25

\* For shallow screw recess

## 1/4" HEX POWER DRIVE – ACR®



Part Number	Point Size	Overall Length IN. MM.	Body Dia. IN. MM.	Turned Length IN. MM.
491-ACR1-DX	1	1 15/16 49	3/16 4.8	1 1/4 32
491-ACR1-RX	1	1 15/16 49	3/16 4.8	1 1/4 32
491-ACR1X	1	1 15/16 49	3/16 4.8	1 1/4 32
491-A-ACR1X	1	2 3/4 70	3/16 4.8	2 51
492-ACR2-DX	2	1 15/16 49	1/4 6.4	1 1/4 32
492-ACR2-RX	2	1 15/16 49	1/4 6.4	1 1/4 32
492-ACR2X	2	1 15/16 49	1/4 6.4	1 1/4 32
492-A-ACR2-DX	2	2 3/4 70	1/4 6.4	2 51
492-A-ACR2X	2	2 3/4 70	1/4 6.4	2 51
492-B-ACR2-DX	2	3 1/2 89	1/4 6.4	2 3/4 70
492-B-ACR2X	2	3 1/2 89	1/4 6.4	2 3/4 70
492-C-ACR2-DX	2	6 152	1/4 6.4	2 51
493-ACR3X	3	1 15/16 49	5/16 7.9	1 25

Part Number  
Suffix - R  
For removal



Part Number  
Suffix - D  
For driving



No Part  
Number Suffix  
For both removal and driving



## 1/4" HEX POWER DRIVE WITH FINDER SLEEVE



Part Number	Point Size	Overall Length IN. MM.	Sleeve Dia. IN. MM.
SD-556-A	2	3 1/2 89	7/16 11.1
SD-556	2	6 152	7/16 11.1

## 7/16" HEX POWER DRIVE



Part Number	Point Size	Overall Length IN. MM.	Body Dia. IN. MM.	Turned Length IN. MM.
482X	2	3 1/2 89	1/4 6.4	2 1/4 57
483X	3	3 1/2 89	5/16 7.9	2 1/4 57
484X	4	3 1/2 89	3/8 9.5	2 1/4 57



### SELECTING A BIT:

Take the guesswork out of bit selection. APEX Phillips and Torx® ring gauges help you find the right bit for your fasteners. Order SD-3749 for Phillips and SD-4064-G for Torx®.

# PHILLIPS BITS

## 9/32" NO. 130A YANKEE DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
451X	1	3 1/4	83	3/16	4.8
452X	2	3 1/4	83	9/32	7.1
453X	3	3 1/4	83	5/16	7.9

## 10-32 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
501X	1	1 1/2	38	3/16	4.8
501-AX	1	1 13/16	46	3/16	4.8
SD-4739	2	1 1/2	38	3/16	4.3
502X	2	1 1/2	38	1/4	6.4
502-ACR2X*	2	1 1/2	38	1/4	6.4
SD-1342-2	2	1 3/4	45	1/4	6.4
502-AX	2	1 13/16	46	1/4	6.4
503X	3	1 1/2	38	5/16	7.9

\* Features ACR® Anti-camout ribs; see tool tip on page 10.

## 12-24 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
551X	1	1 3/16	30	.30	7.6
552X	2	1 3/16	30	.30	7.6
552I	2	1 3/16	30	.30	7.6
553X	3	1 3/16	30	.30	7.6

## 1/4"-24 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
401X	1	1 1/2	38	3/16	4.8
402X	2	1 1/2	38	1/4	6.4
403X	3	1 1/2	38	5/16	7.9
403I	3	1 1/2	38	5/16	7.9

## 8-32 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
591X	1	1 3/16	30	7/32	5.6
592X	2	1 3/16	30	7/32	5.6

## FEMALE SQUARE SERVICE DRIVE



Part Number	Point Size	Female Square Drive IN.	Overall Length		Body Dia.	
			IN.	MM.	IN.	MM.
821	1	1/4	2	51	1/4	6.4
822	2	1/4	2	51	1/4	6.4
832	2	3/8	2 5/8	67	5/16	7.9
833	3	3/8	2 5/8	67	5/16	7.9
834	4	3/8	2 5/8	67	5/16	7.9
852	2	1/2	2 7/8	73	5/16	7.9
853	3	1/2	2 7/8	73	5/16	7.9
854	4	1/2	2 7/8	73	3/8	9.5

## MORTORQ® BITS



Part Number	Driver/Size Type IN.	MorTorq Size	Overall Length	
			IN.	MM.
440-MT-00	1/4 Hex Insert	00	1	25
440-MT-0	1/4 Hex Insert	0	1	25
440-MT-1	1/4 Hex Insert	1	1	25
440-MT-2	1/4 Hex Insert	2	1	25
480-MT-3	5/16 Hex Insert	3	1 1/4	32
AM-MT-0	1/4 Hex Power	0	1 15/16	49
AM-MT-1	1/4 Hex Power	1	1 15/16	49
AM-MT-2	1/4 Hex Power	2	1 15/16	49
AN-MT-3	7/16 Hex Power	3	1 1/4	32
AN-MT-4	7/16 Hex Power	4	1 1/4	32

## MORTORQ® SUPER



## 5/16" HEX INSERT BITS

Part Number	Mortorq Super Size	Overall Length	
		IN.	MM.
480-MTS-2	2	1 1/4	32

# A

### DIFFERENCE BETWEEN INSERT & POWER BIT:







Insert bits are commonly used with a bit holder in power tool applications. This combination is economical, provides flexibility and allows a fastener to be magnetically held by the bit. Power bits are placed directly into the power tool chuck. See pages 34-36 for a complete listing of APEX bit holders.



## TYPES OF HEADS

Note: When ordering slotted bits, please remember that head sizes and slot widths of hardened, self tapping, and sheet metal screws do not conform to the same specifications as standard wood or machine screws described in the chart below. Also, because of variations in these dimensions among screws from different manufacturers, bits should be ordered to head and slot size rather than screw size.

## SLOTTED SCREW SIZES

Diameter of Head										
Screw Sizes										Width of Slot
	Flat / Oval Head Wood	Mach.	Round Head Wood	Mach.	Truss Head	Binding Head	Fillister Cap Mach.	Pan Head		
1	.146	.146	.138	.138	—	—	—	.118	—	.026
	.130	.130	.122	.122	—	—	—	.104	—	.019
2	.172	.172	.162	.162	.194	.181	—	.140	.167	.031
	.156	.156	.146	.146	.180	.171	—	.124	.155	.023
3	.199	.199	.187	.187	.226	.208	—	.161	.193	.035
	.181	.181	.169	.169	.211	.197	—	.145	.180	.027
4	.225	.225	.211	.211	.257	.235	—	.183	.219	.039
	.207	.207	.193	.193	.241	.223	—	.166	.205	.031
5	.252	.252	.236	.236	.289	.263	—	.205	.245	.043
	.232	.232	.217	.217	.272	.249	—	.187	.231	.035
6	.279	.279	.260	.260	.321	.290	—	.226	.270	.048
	.257	.257	.240	.240	.303	.275	—	.208	.256	.039
7	.305	—	.285	—	.352	—	—	—	.296	.048
	.283	—	.264	—	.333	—	—	—	.281	.039
8	.332	.332	.309	.309	.384	.344	—	.270	.322	.054
	.308	.308	.287	.287	.364	.326	—	.250	.306	.045
9	.358	—	.334	—	—	—	—	—	—	.054
	.334	—	.311	—	—	—	—	—	—	.045
10	.385	.385	.359	.359	.448	.339	—	.313	.373	.060
	—	.359	.334	.334	.425	.378	—	.292	.357	.050
12	.438	.438	.408	.408	.511	.454	—	.357	.425	.067
	.410	.410	.382	.382	.487	.430	—	.334	.407	.056
14	.491	—	.457	—	—	—	—	—	—	.075
	.461	—	.424	—	—	—	—	—	—	.064
1/4"	—	.507	—	.472	.573	.513	.375	.414	.492	.075
	—	.477	—	.443	.546	.488	.363	.389	.473	.064
16	.544	—	.506	—	—	—	—	—	—	.075
	.512	—	.476	—	—	—	—	—	—	.064
18	.597	—	.555	—	—	—	—	—	—	.084
	.563	—	.523	—	—	—	—	—	—	.072
5/16"	—	.635	—	.590	.698	.641	.437	.518	.615	.084
	—	.600	—	.557	.666	.609	.424	.490	.594	.072
20	.650	—	.604	—	—	—	—	—	—	.084
	.614	—	.570	—	—	—	—	—	—	.072
24	.756	—	.702	—	—	—	—	—	—	.094
	.716	—	.664	—	—	—	—	—	—	.081
3/8"	—	.762	—	.708	.823	.769	.562	.622	.740	.094
	—	.722	—	.670	.787	.731	.547	.590	.716	.081

# SLOTTED BITS

## **1/4" HEX INSERT BITS**

**LIMITED CLEARANCE**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
445-000X	1F-2R	1	25	.021	0.53	.125	3.2
445-00X	2F-3R	1	25	.025	0.64	.140	3.6
445-0X	3F-4R	1	25	.030	0.76	.154	3.9
445-10X	4F-5R	1	25	.034	0.86	.185	4.7
445-20X	5F-6R	1	25	.036	0.91	.216	5.5
445-30X	6R-7R	1	25	.038	0.97	.248	6.3
445-00-15X	2F-3R	11/2	38	.028	0.71	.138	3.5
445-0-15X	3F-4R	11/2	38	.032	0.81	.154	3.9
445-10-15X	4F-5R	11/2	38	.034	0.86	.185	4.7
445-20-15X	5F-6R	11/2	38	.036	0.91	.216	5.5
445-30-15X	6R-7R	11/2	38	.038	0.97	.248	6.3

## **1/4" HEX INSERT BITS**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
445-1X	4F-5R	1	25	.034	0.86	3/16	4.8
445-2X	6F-8R	1	25	.040	1.02	7/32	5.6
445-3X	8F-10R	1	25	.042	1.07	1/4	6.4
445-4X	10F-12R	1	25	.046	1.17	9/32	7.1
445-5X	12R-14R	11/2	38	.050	1.27	5/16	7.9
445-6X	14F-16R	11/2	38	.050	1.40	23/64	9.1
445-1-15X	4F-5R	11/2	38	.034	0.86	3/16	4.8
445-2-15X	6F-8R	11/2	38	.040	1.02	7/32	5.6
445-3-15X	8F-10R	11/2	38	.042	1.07	1/4	6.4
445-4-15X	10F-12R	11/2	38	.046	1.17	9/32	7.1

## **5/16" HEX INSERT BITS**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
485-1X	4F-5R	11/2	38	.034	0.86	.188	4.8
485-2X	6F-8R	11/2	38	.040	1.02	.219	5.6
485-3X	8F-10R	11/2	38	.042	1.07	.25	6.4
485-4X	10F-12R	11/2	38	.046	1.17	.296	7.52
485-5X	12F-14R	11/2	38	.050	1.27	.328	8.33
485-6X	14F-16R	11/2	38	.055	1.40	.328	8.33
485-7X	16F-18R	13/4	45	.060	1.52	.50	12.7

## **5/16" HEX POWER DRIVE**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
635-6X	10F-12R	2 1/4	57	0.046	1.17	0.36	9.14
635-7X	12F-14R	2 1/4	57	0.050	1.27	0.395	10.03
635-8X	14F-16R	2 1/4	57	0.055	1.40	0.457	11.61
635-9X	16F-20R	2 1/4	57	0.060	1.52	0.503	12.78
635-10X	20F-22R	2 1/4	57	0.062	1.57	0.545	13.84

## **10-32 SCREW SHANK DRIVE**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
103-00X	2F-3R	11/2	38	0.026	0.66	0.14	3.56
103-1X	4F-5R	11/2	38	0.034	0.86	0.187	4.75
103-2X	5F-6R	11/2	38	0.036	0.91	0.225	5.72
103-3X	6F-7R	11/2	38	0.038	0.97	0.25	6.35
103-4X	7F-8R	11/2	38	0.040	1.02	0.275	7.24
103-5X	8F-10R	11/2	38	0.042	1.07	0.296	7.52
103-6X	10F-12R	11/2	38	0.046	1.17	0.309	7.24

## **1/4"-24 SCREW SHANK DRIVE**



Part Number	Screw Size	Overall Length		Blade Thickness		Blade Width	
		IN.	MM.	IN.	MM.	IN.	MM.
309-000X	1F-2R	11/2	38	0.022	0.56	0.125	3.18
309-00X	2F-3R	11/2	38	0.026	0.66	0.14	3.56
309-1X	4F-5R	11/2	38	0.034	0.86	0.187	4.75
309-2X	5F-6R	11/2	38	0.036	0.91	0.225	5.72
309-3X	6F-7R	11/2	38	0.038	0.97	0.25	6.35
309-4X	7F-8R	11/2	38	0.040	1.02	0.285	7.24
309-5X	8F-10R	11/2	38	0.042	1.07	0.296	7.52
309-6X	10F-12R	11/2	38	0.046	1.17	0.315	8
309-8X	14F-16R	11/2	38	0.055	1.40	0.361	9.17



# SLOTTED BITS

## 1/4" HEX POWER DRIVE



Part Number	Screw Size	Overall Length		Blade Width		Blade Thickness	
				Body Dia.		IN.	MM.
IN.	MM.	IN.	MM.				
320-000X	1F-2R	1 15/16	49	.022	.56	.122	3.10
326-000X	1F-2R	2 3/4	70	.022	.56	.122	3.10
323-000X	1F-2R	3	76	.022	.56	.122	3.10
327-000X	1F-2R	3 1/2	89	.022	.56	.122	3.10
324-000X	1F-2R	4	102	.022	.56	.122	3.10
325-000X	1F-2R	5	127	.022	.56	.122	3.10
328-000X	1F-2R	6	152	.022	.56	.122	3.10
320-00X	2F-3R	1 15/16	49	.026	.66	.134	3.40
326-00X	2F-3R	2 3/4	70	.026	.66	.134	3.40
323-00X	2F-3R	3	76	.026	.66	.134	3.40
327-00X	2F-3R	3 1/2	89	.026	.66	.134	3.40
324-00X	2F-3R	4	102	.026	.66	.134	3.40
325-00X	2F-3R	5	127	.026	.66	.134	3.40
328-00X	2F-3R	6	152	.026	.66	.134	3.40
320-0X	3F-4R	1 15/16	49	.030	.76	.151	3.84
326-0X	3F-4R	2 3/4	70	.030	.76	.151	3.84
323-0X	3F-4R	3	76	.030	.76	.151	3.84
327-0X	3F-4R	3 1/2	89	.030	.76	.151	3.84
324-0X	3F-4R	4	102	.030	.76	.151	3.84
325-0X	3F-4R	5	127	.030	.76	.151	3.84
328-0X	3F-4R	6	152	.030	.76	.151	3.84
320-1X	4F-5R	1 15/16	49	.034	.86	.187	4.75
326-1X	4F-5R	2 3/4	70	.034	.86	.187	4.75
323-1X	4F-5R	3	76	.034	.86	.187	4.75
327-1X	4F-5R	3 1/2	89	.034	.86	.187	4.75
324-1X	4F-5R	4	102	.034	.86	.187	4.75
325-1X	4F-5R	5	127	.034	.86	.187	4.75
328-1X	4F-5R	6	152	.034	.86	.187	4.75
320-20X	5F-6R	1 15/16	49	.036	.91	.215	5.46
326-20X	5F-6R	2 3/4	70	.036	.91	.215	5.46
323-20X	5F-6R	3	76	.036	.91	.215	5.46
327-20X	5F-6R	3 1/2	89	.036	.91	.215	5.46
324-20X	5F-6R	4	102	.036	.91	.215	5.46
325-20X	5F-6R	5	127	.036	.91	.215	5.46
328-20X	5F-6R	6	152	.036	.91	.215	5.46
320-2X	5F-6R	1 15/16	49	.036	.91	.250	6.35
326-2X	5F-6R	2 3/4	70	.036	.91	.250	6.35
323-2X	5F-6R	3	76	.036	.91	.250	6.35
327-2X	5F-6R	3 1/2	89	.036	.91	.250	6.35
324-2X	5F-6R	4	102	.036	.91	.250	6.35
328-2X	5F-6R	6	152	.036	.91	.250	6.35
320-3X	6F-8R	1 15/16	49	.038	.97	.250	6.35
326-3X	6F-8R	2 3/4	70	.038	.97	.250	6.35
323-3X	6F-8R	3	76	.038	.97	.250	6.35

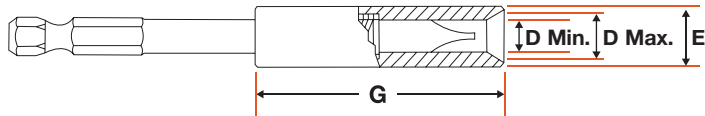
Part Number	Screw Size	Overall Length		Blade Width		Blade Thickness	
				Body Dia.		IN.	MM.
IN.	MM.	IN.	MM.				
327-3X	6F-8R	3 1/2	89	.038	.97	.250	6.35
324-3X	6F-8R	4	102	.038	.97	.250	6.35
325-3X	6F-8R	5	127	.038	.97	.250	6.35
328-3X	6F-8R	6	152	.038	.97	.250	6.35
320-4X	8F-10R	1 15/16	49	.042	1.07	.275	6.99
326-4X	8F-10R	2 3/4	70	.042	1.07	.275	6.99
323-4X	8F-10R	3	76	.042	1.07	.275	6.99
327-4X	8F-10R	3 1/2	89	.042	1.07	.275	6.99
324-4X	8F-10R	4	102	.042	1.07	.275	6.99
325-4X	8F-10R	5	127	.042	1.07	.275	6.99
328-4X	8F-10R	6	152	.042	1.07	.275	6.99
320-5X	10F-12R	1 15/16	49	.046	1.17	.312	7.92
326-5X	10F-12R	2 3/4	70	.046	1.17	.312	7.92
323-5X	10F-12R	3	76	.046	1.17	.312	7.92
327-5X	10F-12R	3 1/2	89	.046	1.17	.312	7.92
324-5X	10F-12R	4	102	.046	1.17	.312	7.92
325-5X	10F-12R	5	127	.046	1.17	.312	7.92
328-5X	10F-12R	6	152	.046	1.17	.312	7.92
320-6X	12F-14R	1 15/16	49	.050	1.27	.360	9.14
326-6X	12F-14R	2 3/4	70	.050	1.27	.360	9.14
323-6X	12F-14R	3	76	.050	1.27	.360	9.14
327-6X	12F-14R	3 1/2	89	.050	1.27	.360	9.14
324-6X	12F-14R	4	102	.050	1.27	.360	9.14
325-6X	12F-14R	5	127	.050	1.27	.360	9.14
328-6X	12F-14R	6	152	.050	1.27	.360	9.14

If the tool you need does not appear in this catalog, 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 application.

Give us a call at: 1-800-845-5629  
or visit our website [www.APEX-tools.com](http://www.APEX-tools.com)

# ⊖ SLOTTED POWER BITS WITH FINDER SLEEVES

Each finder sleeve assembly part number begins with a letter prefix that denotes the particular sleeve used with that assembly. The chart below gives complete dimensional data for each finder sleeve.



Part Number	Screw Size	D Max. IN. MM.	D Min. IN. MM.	Sleeve Length G IN. MM.	Sleeve Dia. E IN. MM.
L	5F-6R	.260 6.60	.233 5.92	17/8 47.6	3/8 9.5
M	6F-6R	.309 7.85	.261 6.63	17/8 47.6	7/16 11.1
P	8F-6R	.368 9.35	.310 7.87	17/8 47.6	1/2 12.7
NP*	8F-10R	.368 9.35	.310 7.87	17/8 47.6	7/16 11.1
R	10F-12R	.415 10.54	.369 9.37	2 50.8	9/16 14.3
S	12F-14R	.478 12.14	.416 10.57	2 50.8	5/8 15.9
T	14F-16R	.522 13.26	.479 12.17	2 1/8 54.0	11/16 17.5
U	16F-20R	.621 15.77	.523 13.28	2 1/8 54.0	3/4 19.1
W	20F-22R	.665 16.89	.622 15.80	2 1/16 52.4	13/16 20.3
Y	24F-24R	.715 18.16	.666 16.92	2 1/32 51.6	15/16 23.8

\* Sleeve NP is a cup type sleeve.

## 1/4" HEX POWER DRIVE



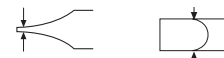
Part No. Complete Assembly	Part No. Bit Only	Screw Size	Bit Length IN. MM.	Blade Thickness IN. MM.	Bit Body Dia. IN. MM.
NOL-320X	320-LX	5F-6R	3 1/2 89	.036 91	0.193 4.9
L-320X	320-LX	5F-6R	3 3/4 95	.036 91	0.193 4.9
M-320X	320-MX	6F-8R	3 3/4 95	.038 97	0.241 6.12
NM-320X	320-MX	6F-8R	3 1/2 89	.038 97	0.241 6.12
P-320X	320-PX	8F-10R	3 3/4 95	.042 1.07	0.290 7.37
R-320X	320-RX	10F-12R	3 3/4 95	.046 1.17	0.350 8.89
S-320X	320-SX	12F-14R	3 7/8 98	.050 1.27	0.395 10.03
T-320X	320-TX	14F-16R	4 1/8 105	.055 1.40	0.457 11.61



### ADVANTAGE OF USING FINDER SLEEVES

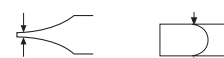
A finder sleeve makes it easy to engage slotted fasteners with the bit. It guides the bit so there is less "searching" for the proper alignment between blade and slot.

## 1/4" HEX POWER DRIVE – LONG SERIES



Part No. Complete Assembly	Part No. Bit Only	Screw Size	Bit Length IN. MM.	Blade Thickness IN. MM.	Bit Body Dia. IN. MM.
L-328X	328-LX	5F-6R	6 1/2 165	0.036 0.91	0.193 4.9
M-328X	328-MX	6F-8R	6 1/2 165	0.038 0.97	0.241 6.12
P-328X	328-PX	8F-10R	6 1/2 165	0.042 1.07	0.290 7.37
R-328X	328-RX	10F-12R	6 1/2 165	0.046 1.17	0.350 8.89
S-328X	328-SX	12F-14R	6 1/2 165	0.050 1.27	0.395 10.03

## 1/4" HEX POWER DRIVE – EXTRA SHORT SERIES



Part No. Complete Assembly	Part No. Bit Only	Screw Size	Bit Length IN. MM.	Blade Thickness IN. MM.	Bit Body Dia. IN. MM.
000L-322X	322-000LX	2F-3R	2 3/32 53	.026 0.66	0.138 3.50
00L-322X	322-00LX	3F-4R	2 3/32 53	.030 0.76	0.154 3.91
0L-322X	322-0LX	4F-5R	2 3/32 53	.034 0.86	0.185 4.70
L-322X	322-LX	5F-6R	2 3/32 53	.036 0.91	0.185 4.70
M-322X	322-MX	6F-8R	2 3/32 53	.040 1.02	0.248 6.30
P-322X	322-PX	8F-10R	2 3/32 53	.042 1.07	0.283 7.19
R-322X	322-RX	10F-12R	2 3/32 53	.046 1.17	0.283 7.19


## 7/16" HEX POWER DRIVE



Part Number	Screw Size	Bit Length IN. MM.	Blade Thickness IN. MM.	Bit Body Dia. IN. MM.
R-321X	10F-12R	3 7/8 98	.046 1.17	0.350 8.89
S-321X	12F-14R	3 7/8 98	.050 1.27	0.395 10.03
T-321X	14F-16R	4 1/8 105	.055 1.40	0.457 11.61
U-321X	16F-20R	4 1/8 105	.060 1.52	0.503 12.78
W-321X	20F-22R	4 1/8 105	.062 1.57	0.545 13.84
Y-321X	24F-24R	4 1/8 105	.065 1.65	0.595 15.11

## 1/4" HEX INSERT BITS




Part Number	Torxalign® Part Number	Driver Size		Overall Length IN. MM.	
440-TX-05X	-	T-5	.055	1	25
440-TX-06X	-	T-6	.065	1	25
440-TX-07X	-	T-7	.077	1	25
440-TX-08X	-	T-8	.090	1	25
440-TX-09X	-	T-9	.097	1	25
440-TX-10X	440-TX-10-W	T-10	.107	1	25
440-TX-15X	440-TX-15-W	T-15	.128	1	25
440-TX-15-125	-	T-15	.128	1 1/4	32
440-TX-20X	440-TX-20-W	T-20	.151	1	25
440-TX-20-125	-	T-20	.151	1 1/4	32
440-TX-20-2	-	T-20	.151	2	51
440-TX-25X	440-TX-25-W	T-25	.173	1	25
440-TX-27X	440-TX-27-W	T-27	.195	1	25
440-TX-30X	440-TX-30-W	T-30	.216	1	25
440-TX-30I	440-TX-30-W	T-30	.216	1	25
440-TX-40X	440-TX-40-W	T-40	.260	1	25
440-TX-40I	440-TX-40-W	T-40	.260	1	25
440-TX-45X*	-	T-45	.306	1 1/4	32
440-TX-50X*	-	T-50	.346	1 1/4	32

\* Hex will break before rated ultimate torque of the Torx® point is met.


## 5/16" HEX INSERT BITS



Part Number	Driver Size		Overall Length IN. MM.	
480-TX-20X	T-20	.151	1 1/4	32
480-TX-25X	T-25	.173	1 1/4	32
480-TX-27X	T-27	.195	1 1/4	32
480-TX-30X	T-30	.216	1 1/4	32
480-TX-40X	T-40	.260	1 1/4	32
480-TX-40I	T-40	.260	1 1/4	32
480-TX-40-4X	T-40	.260	4	102
480-TX-45X	T-45	.306	1 1/4	32
480-TX-45-6	T-45	.306	6	152
480-TX-50X	T-50	.346	1 1/4	32
480-TX-55X	T-55	.440	1 1/4	32


## 5/16" HEX INSERT BITS ⊕ TAMPER RESISTANT



Part Number	Driver Size		Overall Length IN. MM.	
480-TX-40-H	T-40-H	.260	1 1/4	32
480-TX-45-H	T-45-H	.306	1 1/4	32
480-TX-50-H	T-50-H	.346	1 1/4	32
480-TX-55-H	T-55-H	.440	1 1/4	32

## 5/8" HEX INSERT BITS



Part Number	Hex Flat Type	Driver Size		Overall Length IN. MM.	
SZ-TX-55-A	DP	T-55	.440	1 9/16	40
SZ-TX-60-A	DP	T-60	.520	1 9/16	40
SZ-TX-70-A	DP	T-70	.610	1 9/16	40
SZ-TX-70-A-3	TH	T-70	.610	3	76
SZ-TX-80-A*	TH	T-80	.689	1 9/16	40

\* DP-Drill Point; TH-Thru Hole. 5/8" insert bits are used with SC and RP adapters found in this section.

## 7/8" HEX INSERT BITS




Part Number	Hex Flat Type	Driver Size		Overall Length IN. MM.	
SZ-TX-90-A*	TH	T-90	.782	2	51
SZ-TX-100-A	TH	T-100	.870	2	51

\* TH-Thru Hole. 7/8" insert bits are used with RP adapters found in this section.

## 1/4" HEX INSERT BITS ⊕ TAMPER RESISTANT



Part Number	Driver Size		Overall Length IN. MM.	
440-TX-07-H	T-7-H	.077	1	25
440-TX-08-H	T-8-H	.090	1	25
440-TX-09-H	T-9-H	.097	1	25
440-TX-10-H	T-10-H	.107	1	25
440-TX-15-H	T-15-H	.128	1	25
440-TX-20-H	T-20-H	.151	1	25
440-TX-25-H	T-25-H	.173	1	25
440-TX-27-H	T-27-H	.195	1	25
440-TX-30-H	T-30-H	.216	1	25
440-TX-40-H	T-40-H	.260	1	25



### TAMPER RESISTANT

Tamper resistant Torx® screws feature a post in the center of the recess – this post will only fit into a tamper resistant Torx® bit.



## 1/4" HEX POWER DRIVE



Part Number	Driver Size	A	Body Dia. IN. MM.	Overall Length IN. MM.
49-TX-05	T-5	.055	.119 3	115/16 49
49-A-TX-05	T-5	.055	.119 3	2 3/4 70
49-B-TX-05	T-5	.055	.119 3	3 1/2 89
49-TX-06	T-6	.065	.119 3	115/16 49
49-A-TX-06	T-6	.065	.119 3	2 3/4 70
49-B-TX-06	T-6	.066	.119 3	3 1/2 89
49-TX-07	T-7	.077	.119 3	115/16 49
49-A-TX-07	T-7	.077	.119 3	2 3/4 70
49-B-TX-07	T-7	.077	.119 3	3 1/2 89
49-C-TX-07	T-7	.077	.119 3	6 152
49-TX-08	T-8	.090	.119 3	115/16 49
49-A-TX-08	T-8	.090	.119 3	2 3/4 70
49-B-TX-08	T-8	.090	.119 3	3 1/2 89
49-C-TX-08	T-8	.090	.119 3	6 152
49-TX-09	T-9	.097	.119 3	115/16 49
49-A-TX-09	T-9	.097	.119 3	2 3/4 70
49-B-TX-09	T-9	.097	.119 3	3 1/2 89
49-C-TX-09	T-9	.097	.119 3	6 152
49-TX-10	T-10	.107	.150 3.8	115/16 49
49-A-TX-10	T-10	.107	.150 3.8	2 3/4 70
49-B-TX-10	T-10	.107	.150 3.8	3 1/2 89
49-C-TX-10	T-10	.107	.150 3.8	6 152
49-TX-15	T-15	.128	.150 3.8	115/16 49
49-A-TX-15	T-15	.128	.150 3.8	2 3/4 70
49-B-TX-15	T-15	.128	.150 3.8	3 1/2 89
49-C-TX-15	T-15	.128	.150 3.8	6 152
49-TX-15-8	T-15	.128	.150 3.8	8 203
49-TX-20	T-20	.151	.171 4.3	115/16 49
49-A-TX-20	T-20	.151	.171 4.3	2 3/4 70
49-B-TX-20	T-20	.151	.171 4.3	3 1/2 89
49-TX-20-5	T-20	.151	.171 4.3	5 127
49-C-TX-20	T-20	.151	.171 4.3	6 152
49-TX-25	T-25	.173	.193 4.9	115/16 49
49-A-TX-25	T-25	.173	.193 4.9	2 3/4 70
49-B-TX-25	T-25	.173	.193 4.9	3 1/2 89
49-C-TX-25	T-25	.173	.193 4.9	6 152
49-TX-27	T-27	.195	.215 5.5	115/16 49
49-A-TX-27	T-27	.195	.215 5.5	2 3/4 70
49-B-TX-27	T-27	.195	.215 5.5	3 1/2 89
49-C-TX-27	T-27	.195	.215 5.5	6 152
49-TX-30	T-30	.216	.236 6	115/16 49
49-A-TX-30	T-30	.216	.236 6	2 3/4 70
49-B-TX-30	T-30	.216	.236 6	3 1/2 89
49-C-TX-30	T-30	.216	.236 6	6 152
49-TX-40	T-40	.260	.309 7.8	115/16 49
49-A-TX-40	T-40	.260	.309 7.8	2 3/4 70
49-B-TX-40	T-40	.260	.309 7.8	3 1/2 89
49-C-TX-40	T-40	.260	.309 7.8	6 152
49-TX-45	T-45	.304	.345 8.7	115/16 49
95-DG-TX40-75MM	T-40	.260	.25 6.4	2.952 75
95-TX-40	T-40	.260	.25 6.4	115/16 49
SD-4693	T-10	.107	.150 3.8	3 75
SD-5284	T-27	.195	.393 10	10 1/2 267

## 1/4" HEX POWER DRIVE – TORXALIGN®



Part Number	Driver Size	A	Body Dia. IN. MM.	Overall Length IN. MM.
49-TX-08-W	T-8	.090	.119 3.0	115/16 49
49-TX-10-W	T-10	.107	.150 3.8	115/16 49
49-TX-15-W	T-15	.128	.150 3.8	115/16 49
49-A-TX-15-W	T-15	.128	.150 3.8	2 3/4 70
49-B-TX-15-W	T-15	.128	.150 3.8	3 1/2 89
49-TX-20-W	T-20	.151	.171 4.3	115/16 49
49-B-TX-20-W	T-20	.151	.171 4.3	3 1/2 89
49-TX-25-W	T-25	.173	.193 4.9	115/16 49
49-TX-27-W	T-27	.195	.215 5.5	115/16 49
49-TX-30-W	T-30	.216	.236 6.0	115/16 49
49-B-TX-30-W	T-30	.216	.236 6.0	3 1/2 89

## 1/4" HEX POWER DRIVE

TAMPER RESISTANT



Part Number	Driver Size	A	Body Dia. IN. MM.	Overall Length IN. MM.
49-TX-10-H	T-10-H	.107	.150 3.8	115/16 49
49-A-TX-10-H	T-10-H	.107	.150 3.8	2 3/4 70
49-B-TX-10-H	T-10-H	.107	.150 3.8	3 1/2 89
49-TX-15-H	T-15-H	.128	.150 3.8	115/16 49
49-A-TX-15-H	T-15-H	.128	.150 3.8	2 3/4 70
49-B-TX-15-H	T-15-H	.128	.150 3.8	3 1/2 89
49-C-TX-15-H	T-15-H	.128	.150 3.8	6 152
49-A-TX-20-H	T-20-H	.151	.171 4.3	2 3/4 70
49-B-TX-20-H	T-20-H	.151	.171 4.3	3 1/2 89
49-C-TX-20-H	T-20-H	.151	.171 4.3	6 152

## 1/4" HEX POWER DRIVE WITH FINDER SLEEVES



Part Number	Driver Size	Sleeve Number	A	Sleeve Dia. IN. MM.	Overall Length IN. MM.
M-32-TX-15	T-15	M	.128	0.437 12.1	3 1/2 89
M-32-TX-20	T-20	M	.151	0.437 12.1	3 1/2 89
NP-32-TX-25	T-25	NP	.173	0.437 12.1	3 3/4 95
R-32-TX-27	T-27	R	.195	0.563 14.3	3 5/8 92
S-32-TX-30	T-30	S	.216	0.625 15.9	3 7/8 98




### TORXALIGN® BITS:

Torxalign® Bits “wedge” into the Torx® recess to firmly hold the fastener to the bit.


## 7/16" HEX POWER DRIVE



Part Number	Driver Size		Body Dia. IN. MM.	Overall Length IN. MM.
SD-5560	T-30	.215	.370 9.4	7 3/8 187
48-TX-40	T-40	.260	.277 7	3 1/2 89
48-TX-45	T-45	.306	.323 8.2	3 1/2 89
48-TX-50	T-50	.346	.363 9.2	3 1/2 89
48-50IP	50IP	.346	.354 9.0	3 1/2 89
48-TX-55	T-55	.440	.503 12.8	3 3/4 95
48-55IP	55IP	.440	.438 11	3 3/4 95


## FEMALE SQUARE SERVICE DRIVE



Part Number	Driver Size		Square Drive	Body Dia. IN. MM.	Overall Length IN. MM.
834-TX-25	T-25	.173	3/8	.240 6.1	2 13/16 71
834-TX30-1.62	T-30	.216	3/8	.234 5.9	1 5/8 41
834-TX40-2.95	T-40	.260	3/8	.277 7.0	2 61/64 75
834-TX-45-1.62	T-45	.306	3/8	.323 8.2	1 5/8 41
834-TX-45-5	T-45	.306	3/8	.323 8.2	5 125
834-TX-50	T-50	.346	3/8	.363 9.2	2 5/8 66
834-TX50-1.62	T-50	.346	3/8	.373 9.4	1 1/4 41
854-55IP	55IP	.439	1/2	.456 11.6	2 7/8 73
854-TX-50	T-50	.346	1/2	.323 8.2	2 7/8 73
854-TX55-150M	T-55	.346	1/2	.363 9.2	5 7/8 150

## 10-32 SCREW SHANK DRIVE



Part Number	Driver Size		Body Dia. IN. MM.	Overall Length IN. MM.
50-TX-08	T-8	.090	.125 3.2	1 1/2 38
50-TX-10	T-10	.107	.150 3.8	1 1/2 38
50-TX-15	T-15	.128	.150 3.8	1 1/2 38
50-TX-20	T-20	.151	.171 4.3	1 1/2 38




### DIFFERENCE BETWEEN TORX® & TORX PLUS® BITS:

Torx Plus® bits and fasteners feature a greater engagement area for higher torque transfer and reduced camout when driving Torx Plus® fasteners. They can provide up to 100% more drive cycles. Torx Plus® bits are not compatible with standard Torx® fasteners.


## 1" SQUARE DRIVE ADAPTERS WITH TORX® INSERT BIT



Part Number	Driver Size		Overall Length IN. MM.	Bit Length (B) IN. MM.
SZ-8L-TX-70	T-70	.610	3 19/32 91	0.90 23
SZ-TX-100	T-100	.870	3 19/32 91	1.130 29

## 12-24 SCREW SHANK DRIVE



Part Number	Driver Size		Body Dia. IN. MM.	Overall Length IN. MM.
55-TX-10	T-10	.107	.150 3.8	1 3/16 30
55-TX-15	T-15	.128	.150 3.8	1 3/16 30
SD-4048	T-15	.128	.309 7.8	1 3/16 30
55-TX-20	T-20	.151	.171 4.3	1 3/16 30
55-TX-25	T-25	.173	.193 4.9	1 3/16 30
55-TX-30	T-30	.216	.309 7.8	1 3/16 30

## 1/4" HEX INSERT BITS



Part Number	Driver Size	A	Overall Length IN. MM.	
440-9IPX	9IP	.098	1	25
440-10IPX	10IP	.107	1	25
440-15IPX	15IP	.128	1	25
440-20IPX	20IP	.151	1	25
440-25IPX	25IPS	.173	1	25
440-25IPX	25IP	.173	1	25
440-27IPX	27IP	.195	1	25
440-30IPX	30IP	.216	1	25
440-40IPX	40IP	.260	1	25
440-45IPX	45IP	.306	1 1/4	32

## 1/4" HEX INSERT BITS

⊕ TAMPER RESISTANT



Part Number	Driver Size	A⊕	Overall Length IN. MM.	
440-10IPRX	10IPR	.107	1	25
440-15IPRX	15IPR	.128	1	25
440-20IPRX	20IPR	.151	1	25
440-25IPRX	25IPR	.173	1	25
440-27IPRX	27IPR	.195	1	25
440-30IPRX	30IPR	.216	1	25
440-40IPRX	40IPR	.260	1	25

## 5/16" HEX INSERT BITS



Part Number	Driver Size	A	Overall Length IN. MM.	
480-30IPX	30IP	.216	1 1/4	32
480-40IPX	40IP	.260	1 1/4	32
480-40IP-CH	40IP	.260	1 1/4	32
480-45IPX	45IP	.306	1 1/4	32
480-50IPX	50IP	.346	1 1/4	32
480-55IPX	55IP	.440	1 1/4	32

## 5/8" HEX INSERT BITS



Part Number	Hex Flat Type	Driver Size	A	Overall Length IN. MM.	
SZ-55IP-AX	DP	55IP	.440	1 1/2	38

## 1/4" HEX POWER DRIVE



Part Number	Driver Size	A	Overall Length IN. MM.	
49-B-5IPX	5IP	.056	3 1/2	89
49-C-8IPX	8IP	.090	6	152
49-10IPX	10IP	.107	1 15/16	49
49-A-10IPX	10IP	.107	2 3/4	70
49-B-10IPX	10IP	.107	3 1/2	89
49-C-10IPX	10IP	.107	6	152
49-15IPX	15IP	.128	1 15/16	49
49-A-15IPX	15IP	.128	2 3/4	70
49-B-15IPX	15IP	.128	3 1/2	89
49-20IPX	20IP	.151	1 15/16	49
49-A-20IPX	20IP	.151	2 3/4	70
49-B-20IPX	20IP	.151	3 1/2	89
49-C-20IPX	20IP	.151	6	152
49-25IPX	25IP	.173	1 15/16	49
49-A-25IPX	25IP	.173	2 3/4	70
49-B-25IPX	25IP	.173	3 1/2	89
49-27IPX	27IP	.195	1 15/16	49
49-A-27IPX	27IP	.195	2 3/4	70
49-B-27IPX	27IP	.195	3 1/2	89
49-30IPX	30IP	.216	1 15/16	49
49-A-30IPX	30IP	.216	2 3/4	70
49-B-30IPX	30IP	.216	3 1/2	89
49-40IPX	40IP	.260	1 15/16	49
49-45IPX	45IP	.306	1 15/16	49

## 1/4" HEX POWER DRIVE

⊕ TAMPER RESISTANT



Part Number	Driver Size	A⊕	Overall Length IN. MM.	
49-10IPRX	10IPR	.107	1 15/16	49
49-15IPRX	15IPR	.128	1 15/16	49
49-20IPRX	20IPR	.151	1 15/16	49
49-25IPRX	25IPR	.173	1 15/16	49
49-27IPRX	27IPR	.195	1 15/16	49
49-30IPRX	30IPR	.216	1 15/16	49
49-40IPRX	40IPR	.260	1 15/16	49

## 10-32 SCREW SHANK DRIVE



Part Number	Driver Size	A	Overall Length IN. MM.	
SD-4984-10IP	10IP	.107	1 1/2	38



## 1/4" HEX INSERT BITS



Part Number	Point Size	Overall Length	
		IN.	MM.
440-1-PZDX	1	1	25
440-2-PZDX	2	1	25
440-215-PZDX	2	1 1/2	38
440-22-PZDX	2	2	51
440-3-PZDX	3	1	25
440-4-PZDX	4	1 1/4	32

## 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.
446-1-PZDX	1	1	25	7/16	11	0.18	4.6
446-2-PZDX	2	1	25	7/16	11	0.18	4.6

## 5/16" HEX INSERT BITS



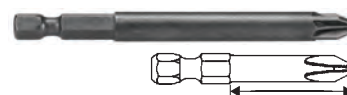
Part Number	Point Size	Overall Length	
		IN.	MM.
480-1-PZDX	1	1 1/4	32
480-2-PZDX	2	1 1/4	32
480-3-PZDX	3	1 1/4	32

## 10-32 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
502-PZDX	2	1 1/2	38	1/4	6.4
SD-1342-2-PZDX	2	1 3/4	45	1/4	6.4

## 1/4" HEX POWER DRIVE



Part Number	Point Size	Overall Length		Body Dia.		Turned Length	
		IN.	MM.	IN.	MM.	IN.	MM.
491-PZDX	1	1 15/16	49	3/16	4.8	1 1/4	32
491-A-PZDX	1	2 3/4	70	3/16	4.8	2	51
491-B-PZDX	1	3 1/2	89	3/16	4.8	2 3/4	70
491-C-PZDX	1	6	152	3/16	4.8	2	51
492-PZDX	2	1 15/16	49	1/4	6.4	1 1/4	51
492-A-PZDX	2	2 3/4	70	1/4	6.4	2	51
492-B-PZDX	2	3 1/2	89	1/4	6.4	2 3/4	70
492-C-PZDX	2	6	152	1/4	6.4	2	51
493-PZDX	3	1 15/16	49	5/16	7.9	1	25
493-A-PZDX	3	2 3/4	70	5/16	7.9	1 3/4	44
493-B-PZDX	3	3 1/2	89	5/16	7.9	2 1/4	57
493-C-PZDX	3	6	152	5/16	7.9	5	127

## 1/4"-24 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
401-PZDX	1	1 1/2	38	3/16	4.8
402-PZDX	2	1 1/2	38	1/4	6.4
403-PZDX	3	1 1/2	38	5/16	7.9

## 8-32 SCREW SHANK DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
591-PZDX	1	1 13/16	30	7/32	5.6
592-PZDX	2	1 13/16	30	7/32	5.6

# A

### DIFFERENCE BETWEEN A PHILLIPS AND A POZIDRIV®:

The shallow "cross" indentation in the screw head identifies a Pozidriv® fastener. The Pozidriv® bit and recess design provides more surface contact than a standard Phillips for more torque with less possibility of camout.

## 1/4" HEX INSERT BITS



Part Number	Driver Size	Overall Length	
		IN.	MM.
440-1-SFX	1	1	25
440-2-SFX	2	1	25
440-215-SFX	2	1 1/2	38
440-22-SFX	2	2	51
440-225-SFX	2	2 1/2	64
440-3-SFX	3	1	25

## 1/4" HEX INSERT BITS



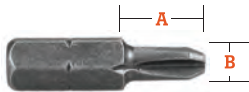
Part Number	Point Size	Overall Length	
		IN.	MM.
950-QD-2	2	1	25

## 1/4" HEX POWER DRIVE



Part Number	Point Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
95-QD-2	2	1 15/16	49	1/4	6.4
95-A-QD-2	2	2 3/4	70	1/4	6.4
95-B-QD-2	2	3 1/2	89	1/4	6.4
95-QD-3	3	1 15/16	49	5/16	7.9

## 1/4" HEX INSERT BITS LIMITED CLEARANCE



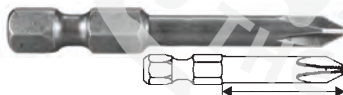
Part Number	Point Size	Overall Length		Turned Length (A)		Turned OD (B)	
		IN.	MM.	IN.	MM.	IN.	MM.
446-2-SFX	2	1	25	7/16	11	0.18	4.6

## 5/16" HEX INSERT BITS



Part Number	Point Size	Overall Length	
		IN.	MM.
480-2-SFX	2	1 1/4	32

## 1/4" HEX POWER DRIVE



Part Number	Point Size	Overall Length		Body Dia.		Turned OD (B)	
		IN.	MM.	IN.	MM.	IN.	MM.
491-SFX	1	1 15/16	49	3/16	5	1 1/4	32
491-A-SFX	1	2 3/4	70	3/16	5	2	51
491-B-SFX	1	3 1/2	89	3/16	5	2 3/4	70
491-C-SFX	1	6	152	3/16	5	2	51
492-SFX	2	1 15/16	49	1/4	6	1 1/4	32
492-A-SFX	2	2 3/4	70	1/4	6	2	51
492-B-SFX	2	3 1/2	89	1/4	6	2 3/4	70
492-C-SFX	2	6	152	1/4	6	2	51



### SEL-O-FIT™ BITS

Sel-O-Fit™ bits are designed to provide a more efficient means of driving Pozidriv® screws. The Sel-O-Fit™ bit places torque on the strongest and most mechanically advantageous portion of the driver tip. This allows more torque to be applied while minimizing the possibility of breakage and camout.

# FREARSON BITS

## 1/4" HEX INSERT BITS



Part Number	Point Size	Overall Length	
		IN.	MM.
440-FX	All	1	25
446-FX	All	1	25

## 5/16" HEX INSERT BIT



Part Number	Point Size	Overall Length	
		IN.	MM.
480-FX	All	1 3/8	35

## 1/4" HEX POWER DRIVE



Part Number	Screw Size	Overall Length		Body Dia.		Turned Length	
		IN.	MM.	IN.	MM.	IN.	MM.
491-FX	All	1 15/16	49	3/16	4.8	1 1/4	32
492-FX	All	1 15/16	49	1/4	6	1 1/4	32
493-FX	All	1 15/16	49	5/16	8	1	25
491-AFX	All	2 3/4	70	3/16	4.8	2	51
492-AFX	All	2 3/4	70	1/4	6	2	51
491-BFX	All	3 1/2	89	3/16	4.8	2 3/4	70
492-BFX	All	3 1/2	89	1/4	6	2 3/4	70
493-BFX	All	3 1/2	89	5/16	8	2 1/2	64
491-CFX	All	6	152	3/16	4.8	2	51
492-CFX	All	6	152	1/4	6	2	51

## 12-24 SCREW SHANK DRIVE



Part Number	Screw Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
552-FX	All	1 3/16	30	.30	8

## 1/4" FEMALE SQUARE SERVICE DRIVE



Part Number	Screw Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
822-F	All	2	51	1/4	6

## 3/8" FEMALE SQUARE SERVICE DRIVE












Part Number	Screw Size	Overall Length		Body Dia.	
		IN.	MM.	IN.	MM.
832-F	All	2 5/8	67	1/4	6
833-F	All	2 5/8	67	5/16	8
834-F	All	2 5/8	67	3/8	10












# **SOCKET HEAD SIZING CHART**

## SAE

									
Normal Hex Size, IN.	Socket Head 1960 Series	Cap Screws 1936 Series	Flat Head Cap Screws	Button Head Cap Screws	Set Screws	Shoulder Screws	Pressure Plugs	Allenuts	Low Head Cap Screws
.050	0	0,1	1,2	3,4	-	-	-	4	.050
1/16	1	2	3,4	3,4	5,6	-	-	-	5,6
5/64	2,3	3,4	5,6	5,6	8	-	-	-	8
3/32	4,5	5,6	8	8	10	-	-	-	10
7/64	6	-	-	-	-	-	-	-	-
1/8	-	8	10	10	1/4	1/4	-	4,5	1/4
9/64	8	10	-	-	-	-	-	-	-
5/32	10	1/4	1/4	1/4	5/16	5/16	-	6	5/16
3/16	1/4	-	5/16	5/16	3/8	3/8	-	8,10	3/8
7/32	-	5/16	3/8	3/8	7/16	-	1/16	-	7/16
1/4	5/16	-	7/16	-	1/2	1/2	1/8	1/4	1/2
5/16	3/8	3/8, 7/16	1/2	-	5/8	5/8	-	5/16	5/8
3/8	7/16, 1/2	1/2	5/8	-	3/4	3/4	1/4	3/8	-
7/16	-	-	-	-	-	-	3/8	7/16	-
1/2	5/8	5/8	3/4	-	7/8	1	1/2	1/2	-
9/16	-	3/4, 7/8	7/8	-	1, 11/8	-	-	-	-
5/8	3/4	1	1	-	11/4, 13/8	11/4	-	5/8	-
3/4	7/8, 1	11/8, 11/4, 13/8	11/8	-	11/2	-	3/4	3/4	-
7/8	11/8, 11/4	-	11/4, 13/8	-	-	11/2	1	7/8	-
1	13/8, 11/2	11/2	11/2	-	13/4, 2	13/4	11/4	1	-
1 1/4	13/4	-	-	-	-	2	-	1 1/4	-
1 1/2	2	-	-	-	-	-	1 1/2, 2	1 1/2	-
1 3/4	2 1/4, 2 1/2	-	-	-	-	-	-	-	1 3/4
2	2 3/4	-	-	-	-	-	-	-	-

## METRIC

							
Normal Hex Size, IN.es	Socket Head Cap Screws	Flat Head Cap Screws	Button Head Cap Screws	Set Screws	Shoulder Screws	Allenuts	Low Head Cap Screws
1.5	M1.6, M1.7, M2	-	-	M3	-	-	-
2	M2.3, M2.5, M2.6	M3	M3	M4	-	-	-
2.5	M3	M4	M4	M5	-	-	-
3	M4	M5	M5	M6	6mm	M3	M4
4	M5	M6	M6	M8	8mm	M4	M5
5	M6	M8	M8	M10	10mm	M5	M6
6	M8	M10	M10	M12, M14	12mm	M6	M8
8	M10	M12	M12	M16	16mm	M8	M10
10	M12	M14, M16	-	M20	20mm	M10	M12
12	M14	M20	-	M24	-	M12	M14
14	M16	-	-	-	-	-	M16
17	M20	-	-	-	-	M16	M20, M22
19	M24	-	-	-	-	-	M24

# SOCKET HEAD BITS

## 1/4" HEX INSERT BITS



Part Number	Hex Size IN.	Overall Length IN. MM.	
185-000X	1/20	1	25
185-00X	1/16	1	25
185-0X	5/64	1	25
185-1X	3/32	1	25
185-9X	7/64	1	25
185-2X	1/8	1	25
185-10X	9/64	1	25
185-3X	5/32	15/16	33
185-4X	3/16	15/16	33
185-4-4X	3/16	4	102
185-5X	7/32	15/16	33
185-6X	1/4	15/16	33
185-7X	5/16	11/4	32
185-8X	3/8	11/4	32

## 1/4" HEX INSERT BITS METRIC



Part Number	Hex Size MM.	Overall Length IN. MM.	
185-1.5MM	1.5	1	25
185-2MM	2	1	25
185-2.5MM	2.5	1	25
185-3MM	3	1	25
185-4MM	4	15/16	33
185-5MM	5	15/16	33
185-6MM	6	15/16	33
185-7MM	7	11/4	32
185-8MM	8	11/4	32
185-9MM	9	11/4	32
185-10MM	10	11/4	32

## 5/16" HEX INSERT BITS



Part Number	Hex Size IN.	Overall Length IN. MM.	
315-3X	5/32	15/16	33
315-4X	3/16	15/16	33
315-5X	7/32	15/16	33
315-6X	1/4	15/16	33
315-7X	5/16	15/16	33
315-8X	3/8	15/16	33

## 5/16" HEX INSERT BITS – METRIC



Part Number	Hex Size MM.	Overall Length IN. MM.	
315-2.5MM	2.5	1	25
315-4MM	4	15/16	33
315-5MM	5	15/16	33
315-6MM	6	15/16	33
315-7MM	7	15/16	33
315-8MM	8	15/16	33
315-10MM	10	13/8	35
315-12MM	12	11/4	32
315-14MM	14	11/4	32

## 1/4" HEX POWER DRIVE



Part Number	Hex Size IN.	Overall Length IN. MM.	
AM-01-A	1/20	115/16	49
AM-02	1/16	115/16	49
AM-02-A	5/64	115/16	49
AM-03	3/32	115/16	49
AM-03-3	3/32	3	76
AM-03-6	3/32	6	152
AM-03-A	7/64	115/16	49
AM-03-A-4	7/64	4	102
AM-04	1/8	115/16	49
AM-04-3	1/8	3	76
AM-04-35	1/8	31/2	89
AM-04-4	1/8	4	102
AM-04-5	1/8	5	127
AM-04-6	1/8	6	152
AM-04-A	9/64	115/16	49
AM-04-A-4	9/64	4	102
AM-05	5/32	115/16	49
AM-05-3	5/32	3	76
AM-05-35	5/32	31/2	89
AM-05-4	5/32	4	102
AM-05-45	5/32	41/2	114
AM-05-5	5/32	3	127
AM-05-6	5/32	6	152
AM-05-8	5/32	8	203
AM-06	3/16	115/16	49
AM-06-3	3/16	3	76
AM-06-35	3/16	31/2	89
AM-06-4	3/16	4	102
AM-06-6	3/16	6	152
AM-07	7/32	115/16	49
AM-08	1/4	115/16	49
AM-10	5/16	115/16	49

# SOCKET HEAD BITS

## 1/4" HEX POWER DRIVE – METRIC



Part Number	Hex Size MM.	Overall Length IN. MM.	
AM-1.5MM	1.5	115/16	49
AM-2MM	2	115/16	49
AM-2.5MM	2.5	115/16	49
AM-2.5MM-4	2.5	4	102
AM-3MM	3	115/16	49
AM-3MM-3	3	3	76
AM-3MM-4	3	4	102
AM-3MM-6	3	6	152
AM-4MM	4	6	152
AM-4MM-3	4	3	76
AM-4MM-4	4	4	102
AM-4MM-6	4	6	152
AM-5MM	5	115/16	49
AM-5MM-3	5	3	76
AM-5MM-4	5	4	102
AM-5MM-6	5	6	152
AM-6MM	6	115/16	49
AM-6MM-4	6	115/16	49
AM-6MM-6	6	6	152
AM-7MM	7	115/16	49
AM-8MM	8	115/16	49
AM-10MM	10	115/16	49

## 5/16" HEX POWER DRIVE



Part Number	Hex Size IN.	Overall Length IN. MM.	
AS-06	3/16	3	76
AS-10	5/16	3	76
AS-12	3/8	3	76

## 7/16" HEX POWER DRIVE



Part Number	Hex Size IN.	Overall Length IN. MM.	
AN-04	1/8	3 1/2	89
AN-04-A	9/64	3 1/2	89
AN-05	5/32	3 1/2	89
AN-05-6	5/32	6	152
AN-06	3/16	3 1/2	89
AN-06-6	3/16	6	152
AN-07	7/32	3 1/2	89
AN-07-8	7/32	8	203
AN-08	1/4	3 1/2	89
AN-08-8	1/4	8	203
AN-09	9/32	3 1/2	89
AN-10	5/16	3 1/2	89
AN-10-6	5/16	6	152
AN-12	3/8	3 1/2	89
AN-12-6	3/8	6	152
AN-16	1/2	3 1/2	89
AN-16-6	1/2	6	152

## 7/16" HEX POWER DRIVE – METRIC



Part Number	Hex Size MM.	Overall Length IN. MM.	
AN-3MM	3	3 1/2	89
AN-4MM	4	3 1/2	89
AN-5MM	5	3 1/2	89
SD-5585	5	6	152
AN-6MM	6	3 1/2	89
AN-8MM	8	3 1/2	89
AN-10MM	10	3 1/2	89
AN-12MM	12	3 1/2	89
AN-14MM	14	3 1/2	89
AN-14MM-6	14	6	152

## 5/8" HEX POWER DRIVE



Part Number	Hex Size MM.	Overall Length IN. MM.	
AP-08	1/4	4	102
AP-10	5/16	4	102
AP-12	3/8	4	102
AP-16	1/2	4	102
AP-18	9/16	4	102
AP-20	5/8	4	102
AP-24	3/4	4	102



# SOCKET HEAD BITS WITH SQUARE DRIVE ADAPTERS, SAE

## 3/8" SQUARE DRIVE



Number Complete	Part Number		Hex Size IN.	Overall Length		Insert Length	
	Adapter Only	Insert Only		IN. MM.	IN. MM.	IN. MM.	
SZ-9	SC-314	SZ-9-A	3/32	2 1/4	57	13/8	35
SZ-7	SC-314	SZ-7-A	7/64	2 1/4	57	13/8	35
SZ-10	SC-314	SZ-10-A	1/8	2 1/4	57	13/8	35
SZ-11	SC-314	SZ-11-A	5/32	2 1/4	57	13/8	35
SZ-12	SC-314	SZ-12-A	3/16	2 1/4	57	13/8	35
SZ-13	SC-314	SZ-13-A	7/32	2 1/4	57	13/8	35
SZ-14	SC-314	SZ-14-A	1/4	2 1/4	57	13/8	35
SZ-15	SC-314	SZ-15-A	5/16	2 1/4	57	13/8	35
SZ-16	SC-314	SZ-16-A	3/8	2 1/4	57	13/8	35
SZ-17	SC-314	SZ-17-A	1/2	2 1/4	57	13/8	35
SZ-18	SC-314	SZ-18-A	9/16	2 1/4	57	13/8	35
SZ-19	SC-314	SZ-19-A	5/8	2 1/4	57	13/8	35

## 3/4" SQUARE DRIVE



Number Complete	Part Number		Hex Size IN.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only	Insert Only		IN. MM.	IN. MM.	IN. MM.	IN. MM.	IN. MM.	
SZ-30	SC-720	SZ-30-A	3/8	2 5/8	67	19/16	40	29/32	23
SZ-31	SC-720	SZ-31-A	1/2	2 5/8	67	19/16	40	29/32	23
SZ-32	SC-720	SZ-32-A	9/16	2 5/8	67	19/16	40	29/32	23
SZ-33	RP-720	SZ-33-A	5/8	2 5/8	67	19/16	40	29/32	23
SZ-34	RP-720	SZ-34-A	3/4	2 5/8	67	19/16	40	29/32	23
SZ-37	RP-728	SZ-37-A	3/4	3 1/8	79	2	51	11/8	29
SZ-35	SC-720	SZ-35-A	7/8	2 5/8	67	19/16	40	29/32	23
SZ-38	RP-728	SZ-38-A	7/8	3 1/8	79	2	51	11/8	29
SZ-36	RP-720	SZ-36-A	1	2 5/8	67	19/16	40	29/32	23

## 1/2" SQUARE DRIVE



Number Complete	Part Number		Hex Size IN.	Overall Length		Insert Length	
	Adapter Only	Insert Only		IN. MM.	IN. MM.	IN. MM.	
SZ-41	SC-514	SZ-11-A	5/32	2 1/2	64	13/8	35
SZ-20	SC-514	SZ-12-A	3/16	2 1/2	64	13/8	35
SZ-21	SC-514	SZ-13-A	7/32	2 1/2	64	13/8	35
SZ-22	SC-514	SZ-14-A	1/4	2 1/2	64	13/8	35
SZ-23	SC-514	SZ-15-A	5/16	2 1/2	64	13/8	35
SZ-24	SC-514	SZ-16-A	3/8	2 1/2	64	13/8	35
SZ-25	SC-514	SZ-17-A	1/2	2 1/2	64	13/8	35
SZ-42	SC-520	SZ-31-A	1/2	2 1/2	64	19/16	40
SZ-43	SC-514	SZ-18-A	9/16	2 1/2	64	13/8	35
SZ-44	SC-520	SZ-32-A	9/16	2 1/2	64	19/16	40
SZ-26	SC-514	SZ-19-A	5/8	2 1/2	64	13/8	35
SZ-27	RP-520	SZ-33-A	5/8	2 1/2	64	19/16	40

## 1" SQUARE DRIVE



Number Complete	Part Number		Hex Size IN.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only	Insert Only		IN. MM.	IN. MM.	IN. MM.	IN. MM.	IN. MM.	
SZ-80	RP-820	SZ-31-A	1/2	3 1/16	78	19/16	40	29/32	23
SZ-85	RP-828	SZ-85-A	5/8	3 1/4	83	2	51	11/8	29
SZ-86	RP-820	SZ-34-A	3/4	3 1/32	77	19/16	40	29/32	23
SZ-87	RP-828	SZ-37-A	3/4	3 1/4	83	2	51	11/8	29
SZ-88	SC-820	SZ-35-A	7/8	3 1/16	78	19/16	40	29/32	23
SZ-89	RP-828	SZ-38-A	7/8	3 1/4	83	2	51	11/8	29
SZ-91	RP-828	SZ-39-A	1	3 1/4	83	2	51	11/8	29
SZ-101	RP-848	SZ-101-A	1 1/4	3 1/2	89	2 5/8	67	11/8	35

An "RP" prefix indicates adapters with a roll pin that is inserted through the bit.

## 7/16" HEX INSERT BIT ONLY



Part Number	Hex Size IN.	Overall Length	
		IN. MM.	MM.
SZ-12-A-2	3/16	2	51
SZ-15-A-2	5/16	2	51
SZ-11-A-3	5/32	3	76
SZ-12-A-3	3/16	3	76
SZ-13-A-3	7/32	3	76
SZ-14-A-3	1/4	3	76
SZ-15-A-3	5/16	3	76
SZ-16-A-3	3/8	3	76
SZ-14-A-4	1/4	4	102
SZ-15-A-4	5/16	4	102
SZ-16-A-4	3/8	4	102
SZ-12-A-6	3/16	6	152

## SOCKET HEAD BIT & ADAPTER SETS, SAE



APH38	8 piece, 3/8" square drive: 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8
APH56	6 piece, 1/2" square drive: 1/4, 5/16, 3/8, 1/2, 9/16, 5/8

## SOCKET HEAD BIT & ADAPTER SETS, METRIC



APH35M	5 piece, 3/8" square drive: 4mm, 5mm, 6mm, 8mm, 10mm
APH56M	6 piece, 1/2" square drive: 6mm, 8mm, 10mm, 12mm, 14mm, 17mm

# **SOCKET HEAD ADAPTERS & INSERTS, METRIC**

## 3/8" SQUARE DRIVE



Number Complete	Part Number		Insert Only	Hex Size MM.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only				IN.	MM.	IN.	MM.	IN.	MM.
SZ-3-7-4MM	SC-314	SZ-7-4mm	4	2 1/4	57	13/8	35	7/8	22	
SZ-3-7-5MM	SC-314	SZ-7-5mm	5	2 1/4	57	13/8	35	7/8	22	
SZ-3-7-6MM	SC-314	SZ-7-6mm	6	2 1/4	57	13/8	35	7/8	22	
SZ-3-7-8MM	SC-314	SZ-7-8mm	8	2 1/4	57	13/8	35	7/8	22	
SZ-3-7-10MM	SC-314	SZ-7-10mm	10	2 1/4	57	13/8	35	7/8	22	

## 1/2" SQUARE DRIVE



Number Complete	Part Number		Insert Only	Hex Size MM.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only				IN.	MM.	IN.	MM.	IN.	MM.
SZ-5-7-4MM	SC-514	SZ-7-4MM	4	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-5MM	SC-514	SZ-7-5MM	5	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-6MM	SC-514	SZ-7-6MM	6	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-8MM	SC-514	SZ-7-8MM	8	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-10MM	SC-514	SZ-7-10MM	10	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-12MM	SC-514	SZ-7-12MM	12	2 1/2	63	13/8	35	7/8	22	
SZ-5-7-14MM	SC-514	SZ-7-14MM	14	2 1/2	63	13/8	35	15/16	24	
SZ-5-10-14MM	RP-520	SZ-10-14MM	14	2 1/2	63	19/16	40	29/32	23	
SZ-5-10-17MM	RP-520	SZ-10-17MM	17	2 1/2	63	19/16	40	29/32	23	
SZ-5-10-19MM	RP-520	SZ-10-19MM	19	2 1/2	63	19/16	40	29/32	23	

## 3/4" SQUARE DRIVE



Number Complete	Part Number		Insert Only	Hex Size MM.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only				IN.	MM.	IN.	MM.	IN.	MM.
SZ-7-10-10MM	RP-720	SZ-7-10-10MM	10	2 1/2	64	19/16	40	29/32	23	
SZ-7-10-12MM	RP-720	SZ-7-10-12MM	12	2 1/2	64	19/16	40	29/32	23	
SZ-7-10-14MM	RP-720	SZ-7-10-14MM	14	2 1/2	64	19/16	40	29/32	23	
SZ-7-10-17MM	RP-720	SZ-7-10-17MM	17	2 1/2	64	19/16	40	29/32	23	

## 1" SQUARE DRIVE



Number Complete	Part Number		Insert Only	Hex Size MM.	Overall Length		Insert Length		Bit Length (A)	
	Adapter Only				IN.	MM.	IN.	MM.	IN.	MM.
SZ-8-14-17MM	RP-828	SZ-14-17MM	17	3 5/16	84	2	51	11/8	29	
SZ-8-14-19MM	RP-828	SZ-14-19MM	19	3 5/16	84	2	51	11/8	29	
SZ-8-14-22MM	RP-828	SZ-14-22MM	22	3 5/16	84	2	51	11/8	29	
SZ-8-14-24MM	RP-828	SZ-14-24MM	24	3 5/16	84	2	51	11/8	29	
SZ-8-14-27MM	RP-828	SZ-14-27MM	27	3 5/16	84	2	51	11/8	29	

# **SQUARE RECESS BITS**

## 1/4" HEX INSERT BITS



Part Number	Point Size	Nominal Size IN.	Overall Length	
			IN.	MM.
950-0X	0	1/16	1	25
950-1X	1	3/32	1	25
950-2X	2	1/8	1	25
950-3X	3	9/64	1	25

## 1/4" HEX POWER DRIVE



Part Number	Point Size	Nominal Size IN.	Overall Length	
			IN.	MM.
954-0X	0	1/16	115/16	49
954-A-0X	0	1/16	2 3/4	70
954-C-0X	0	1/16	6	152
954-1X	1	3/32	115/16	49
954-A-1X	1	3/32	2 3/4	70
954-B-1X	1	3/32	3 1/2	89
954-C-1X	1	3/32	6	152
954-2X	2	1/8	115/16	49
954-A-2X	2	1/8	2 3/4	70
954-B-2X	2	1/8	3 1/2	89
954-C-2X	2	1/8	6	152
954-3X	3	9/64	115/16	49
954-A-3X	3	9/64	2 3/4	70
954-B-3X	3	9/64	3 1/2	89
954-C-3X	3	9/64	6	152

## SQUARE RECESS BITS

### 1/4" HEX POWER DRIVE TURNED BODY



Part Number	Point Size	Nominal Size IN.	Overall Length IN. MM.	
1950-0X	0	1/16	1 15/16	49
1951-0X	0	1/16	2 3/4	70
1950-1X	1	3/32	1 15/16	49
SD-5535	1	3/32	1 15/16	49
1951-1X	1	3/32	2 3/4	70
1953-1X	1	3/32	3 1/2	89
1950-2X	2	1/8	1 15/16	49
1951-2X	2	1/8	2 3/4	70
1953-2X	2	1/8	3 1/2	89
1956-2X	2	1/8	6	152
1950-3X	3	9/64	1 15/16	49
1951-3X	3	9/64	2 3/4	70
1953-3X	3	9/64	3 1/2	89

### 1/4" HEX POWER DRIVE



Part Number	Point Size MM.	Overall Length IN. MM.	
49-TSQ-4M	4	2	50
49-TSQ-5M	5	2	50
49-TSQ-6M	6	2	50
49-TSQ-8M	8	2	50
49-TSQ-10M	10	2	50
49-TSQ-12M	12	2	50

### 7/16" HEX POWER DRIVE



Part Number	Point Size MM.	Overall Length IN. MM.	
48-TSQ-5M	5	3 1/2	88
48-TSQ-6M	6	3 1/2	88
48-TSQ-8M	8	3 1/2	88
48-TSQ-10M	10	3 1/2	88
48-TSQ-12M	12	3 1/2	88
48-TSQ-14M	14	3 1/2	88

## TRIPLE SQUARE BITS

### 1/4" HEX INSERT BITS



Part Number	Point Size MM.	Overall Length IN. MM.	
440-TSQ-4M	4	1	25
440-TSQ-5M	5	1	25
440-TSQ-6M	6	1	25
440-TSQ-8M	8	1	25
440-TSQ-10M	10	1	25

### 5/16" HEX INSERT BITS



Part Number	Point Size MM.	Overall Length IN. MM.	
480-TSQ-6M	6	1 1/4	32
480-TSQ-8M	8	1 1/4	32
480-TSQ-10M	10	1 1/4	32
480-TSQ-12M	12	1 1/4	32
480-TSQ-14M	14	1 1/4	32

## MALE SQUARE INSERTS FOR PIPE PLUGS

### 1/4" TO 1/2" MALE SQUARE



Part Number	Male Hex IN.	Male Square IN.	Overall Length IN. MM.	
P-1408	7/16	1/4	1 1/4	32
P-1409	7/16	9/32	1 1/4	32
P-1410	7/16	5/16	1 1/4	32
P-1412	7/16	3/8	1 1/4	32
P-1414	7/16	7/16	1 1/4	32
P-1416	7/16	1/2	1 1/4	32
P-2010	5/8	5/16	1 1/2	38
P-2012	5/8	3/8	1 1/2	38
P-2014	5/8	7/16	1 1/2	38
P-2016	5/8	1/2	1 1/2	38

Note: For pipe plug inserts use SC and RP bit holders found on page 35.



### 1/4" HEX INSERT BITS



Part Number	Point Size	Overall Length IN. MM.	
212-0	0	1	25
212-1/4	1/4	1	25
212-1	1	1	25
212-2	2	1	25
212-3	3	1	25
212-4	4	1	25
212-5	5	1	25
212-6	6	1	25
212-8	8	1	25
212-10	10	1	25

### 1/4" HEX INSERT BITS – ACR®

ACR®RIBS FOR REMOVAL ONLY



Part Number	Point Size	Overall Length IN. MM.	
212-1/4-ACR	1/4	1 1/4	32
212-4-ACR	4	1	25
212-6-ACR	6	1 1/4	32
212-8-ACR	8	1 1/4	32
212-10-ACR	10	1 1/4	32

### 5/16" HEX INSERT BITS



Part Number	Point Size	Overall Length IN. MM.	
212-1/4A	1/4	1 1/4	32
212-5/16A	5/16	1 1/4	32
212-3/8A	3/8	1 1/4	32
212-8A	8	1 1/4	32
212-10A	10	1 1/4	32

### 5/16" HEX INSERT BITS – ACR®

ACR®RIBS FOR REMOVAL ONLY



Part Number	Point Size	Overall Length IN. MM.	
212-1/4A-ACR	1/4	1 1/4	32
212-5/16A-ACR	5/16	1 1/4	32

Part Number	Point Size	Overall Length IN. MM.	
170-0	0	1 1/4	32
273-0	0	1 15/16	49
273B-0	0	2 3/4	49
265-0	0	3 1/2	89
265A-0	0	6	152
170-1/4B	1/4	1 1/4	32
170-5/16B	5/16	1 1/4	32
170-3/8B	3/8	1 1/4	32
170-1	1	1 1/4	32
273A-1	1	1 13/16	46
273-1	1	1 15/16	49
273B-1	1	2 3/4	49
265-1	1	3 1/2	89
170-2	2	1 1/4	32
273A-2	2	1 13/16	46
273-2	2	1 15/16	49
273B-2	2	2 3/4	70
265-2	2	3 1/2	89
265A-1	1	6	152
265A-2	2	6	152
170-3	3	1 1/4	32
273A-3	3	1 13/16	46
273-3	3	1 15/16	49
273B-3	3	2 3/4	70
265-3	3	3 1/2	89
265A-3	3	6	152
170-4	4	1 1/4	32
273A-4	4	1 13/16	46
273-4	4	1 15/16	49
273B-4	4	2 3/4	70
265-4	4	3 1/2	89
265A-4	4	6	152
170-5	5	1 1/4	32
273-5	5	1 15/16	49
273B-5	5	2 3/4	70
265-5	5	3 1/2	89
265A-5	5	6	152
170-6	6	1 1/4	32
273A-6	6	1 13/16	46
273-6	6	1 15/16	49
273B-6	6	2 3/4	70
265-6	6	3 1/2	89
265A-6	6	6	152
170-8	8	1 1/4	32
273A-8	8	1 13/16	46
273-8	8	1 15/16	49
273B-8	8	2 3/4	70
265-8	8	3 1/2	89
265A-8	8	6	152
170-10	10	1 1/4	32
273A-10	10	1 13/16	46
273-10	10	1 15/16	49
273B-10	10	2 3/4	70
265-10	10	3 1/2	89
265A-10	10	6	152



# TORQ-SET® BITS

## 1/4" HEX POWER DRIVE – ACR®



Part Number	Point Size	Overall Length IN. MM.	
170-6-ACR	6	11/4	32
170-8-ACR	8	11/4	32
170-10-ACR	10	11/4	32

## 5/16" HEX POWER DRIVE



Part Number	Point Size	Overall Length IN. MM.	
170-1/4A	1/4	11/4	32
170-3/8A	3/8	11/4	32
170-5/16A	5/16	11/4	32
170-8A	8	11/4	32
170-10A	10	11/4	32

## 7/16" HEX POWER DRIVE



Part Number	Point Size	Overall Length IN. MM.	
170-1/4	1/4	11/4	32
265-1/4	1/4	3 1/2	89
265A-1/4	1/4	6	152
170-5/16	5/16	11/4	32
265-5/16	5/16	3 1/2	89
265A-5/16	5/16	6	152
170-3/8	3/8	11/4	32
170-3/8C	3/8	11/4	32
170-7/16	7/16	11/4	32
170-7/16C	7/16	11/4	32
265A-3/8	3/8	6	152
265A-7/16	7/16	6	152

## 7/16" HEX POWER DRIVE – ACR®

ACR® RIBS FOR REMOVAL ONLY



Part Number	Point Size	Overall Length IN. MM.	
170-1/4-ACR	1/4	11/4	32
170-5/16-ACR	5/16	11/4	32

## 5/8" HEX POWER DRIVE



Part Number	Point Size	Overall Length IN. MM.	
170-1/2	1/4	11/4	32
170-9/16	9/16	11/4	32
170-5/8	5/8	11/4	32

## TRI-WING®

## 1/4" HEX INSERT BITS



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TWD-0	0	0-80	–	1	25
TWD-1	1	2-56	4-40	1	25
TWD-2	2	4-40	6-32	1	25
TWD-3	3	6-32	8-32	1	25
TWD-4	4	8-32	10-32	1	25
TWD-5	5	10-32	1/4-28	1	25
TWD-6	6	1/4	5/16	1	25
TWD-7	7	5/16	3/8	1	25

## 1/4" HEX INSERT BITS – ACR®

ACR® RIBS FOR REMOVAL ONLY



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TWD-4-ACR	4	8-32	10-32	1	25
TWD-5-ACR	5	10-32	1/4-28	1	25

## 5/16" HEX INSERT BITS



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TWE-4	4	8-32	10-32	11/4	32
TWE-5	5	10-32	1/4-28	11/4	32

## 1/4" HEX POWER DRIVE



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TW-0	0	0-80	–	11/4	32
TW-1	1	2-56	4-40	11/4	32
TW-2	2	4-40	6-32	11/4	32
TW-3	3	6-32	8-32	11/4	32
TW-4	4	8-32	10-32	11/4	32
TW-5	5	10-32	1/4-28	11/4	32
TWB-6	6	1/4-28	5/16-24	11/4	32
TWB-7	7	5/16-24	3/8-24	11/4	32
TWB-8	8	3/8-24	7/16-20	11/4	32

## 5/16" HEX POWER DRIVE



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TWA-6	6	1/4-28	5/16-24	11/4	32
TWA-7	7	5/16-24	3/8-24	11/4	32
TWA-8	8	3/8-24	7/16-20	11/4	32

## 7/16" HEX POWER DRIVE



Part Number	Recess Size	Screw Size Tension Head	Screw Size Shear Head	Overall Length IN. MM.	
TW-6	6	1/4-28	5/16-24	11/4	32
TW-7	7	5/16-24	3/8-24	11/4	32

## HI-TORQUE® BITS

### 1/4" SQUARE DRIVE BITS



Part Number	Recess Size	Overall Length IN.	Body Dia. IN.	Blade Thickness IN.	Blade Width IN.
HTS-0	0	1	1/2	.029	0.167
HTS-1	1	1	1/2	.049	0.274
HTS-2	2	1	1/2	.059	0.295
HTS-3	3	1	1/2	.059	0.377
HTS-4	4	1	1/2	.073	0.502

### 3/8" SQUARE DRIVE BITS



Part Number	Recess Size	Overall Length IN.	Body Dia. IN.	Blade Thickness IN.	Blade Width IN.
HTS-2A	2	11/4	3/4	.059	0.295
HTS-3A	3	1	3/4	.059	0.377
HTS-4A	4	1	3/4	.073	0.502
HTS-5	5	11/4	3/4	.079	0.629
HTS-6	6	11/4	3/4	.095	0.745

### 1/2" SQUARE DRIVE BITS



Part Number	Recess Size	Overall Length IN.	Body Dia. IN.	Blade Thickness IN.	Blade Width IN.
HTS-7	7	15/8	1	.112	0.884
HTS-8	8	15/8	1	.142	0.995
HTS-9	9	15/8	11/4	.162	1.136
HTS-10	10	15/8	11/4	.182	1.250
HTS-12	12	2 3/8	11/4	.216	1.500

## 1/4" HEX INSERT BITS



Part Number	Recess Size	Overall Length IN.	Body Dia. IN.	Blade Thickness IN.	Blade Width IN.
HTN-B-1	1	11/4	9/32	.049	0.274
HTN-B-2	2	11/4	5/16	.059	0.295
HTN-B-3	3	11/4	3/8	.059	0.377
HTN-B-4	4	11/4	1/2	.073	0.502

Nominal Screw Size	0	1	2	3	4	5	6	8	10	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Hi-Torque Recess	0	0	0	1	1	1	1	2	3	4	5	6	7	8	9	10	12

## + B.N.A.E. BITS

### 1/4" HEX INSERT BITS



Part Number	Point Size MM.	Overall Length IN. MM.	
BNAE-3MM	3	11/8	29
BNAE-4MM	4	11/8	29
BNAE-5MM	5	11/8	29
BNAE-6MM	6	11/8	29
BNAE-8MM	8	11/8	29

### 1/4" HEX INSERT BITS – ACR®




Part Number	Point Size MM.	Overall Length IN. MM.	
BNAE-4MM-ACR	4	11/8	29
BNAE-5MM-ACR	5	11/8	29
BNAE-8MM-ACR	8	11/8	29

ACR® ribs for  
both removal  
and driving




#### FASTENER TOOLS FOR THE AIRCRAFT INDUSTRY:

APEX offers a full selection of fastener tools common to aircraft assembly and maintenance, including Tri-Wing®, Torq-Set®, and Hi-Torque®. More details are available in the APEX Aerospace catalog, SP-354-EN.



# BIT HOLDERS, NUTSETTERS, HAND DRIVERS, & HEX ADAPTERS



**// SUPERIOR PRODUCT  
DURABILITY AND CONSISTENCY  
BECAUSE OF HIGH QUALITY,  
INDUSTRIAL-GRADE MATERIALS  
AND CONSISTENT MANUFACTURING  
PROCESS. REDUCED TOTAL COST  
OF OWNERSHIP SINCE APEX  
TOOLS SIGNIFICANTLY OUTLAST  
COMPETITIVE TOOLS.**

# BIT HOLDERS

## NON MAGNETIC

### 1/4" HEX DRIVE FOR 1/4" HEX INSERTS



Part Number	Overall Length	
	IN.	MM.

490	2 1/8	54
490-3	3	76
490-4	4	102
490-5	5	127
490-6	6	152
490-8	8	203
490-10	10	254

## MAGNETIC

### 1/4" HEX DRIVE FOR 1/4" HEX INSERTS



Part Number	OAL		Notes
	IN.	MM.	

M-490-2	2	51	No Lock Ring
M-490-NR	2 31/32	75	
M-490	2 31/32	75	
M-497	3 3/32	79	3/8" (9.5mm) Reduced Diameter
M-490-4	4	102	
M-490-6	6	152	
M-490-8	8	203	
M-490-10	10	254	
M-490-12	12	304	
M-490-16	16	406	
M-44-90	3 1/4	83	For Flip-Tip™ Reversible Bits



M-495	2 7/8	73	3/8" (9.5mm) Turned Shank
M-495-5	5	127	3/8" (9.5mm) Turned Shank



RM-490	2 7/8	73	Nose Piece Only, #490-RN
RM-490-4	4	102	Nose Piece Only, #490-RN
RM-490-6	6	152	Nose piece only, #490-RN



M-490-2-OR	2	51	With O-Ring Retainer
M-490-OR	3	76	With O-Ring Retainer



#### MAGNETIC BIT HOLDERS:

Bit holders let you use a variety of insert bits in power tool applications. You get economy and flexibility – and fasteners can be magnetically held to the bit.

### 1/4" HEX DRIVE FOR 1/4" HEX INSERTS QUICK RELEASE



Part Number	Overall Length		Notes
	IN.	MM.	

QR-M-490-2	2	51	Magnetic; Quick Release
QR-M-490-A	2 29/32	74	Magnetic; Quick Release
QR-M-490-A6	6	152	Magnetic; Quick Release
QR-M-490-200M	7 7/8	200	Magnetic; Quick Release

### 1/4" HEX DRIVE FOR 5/16" HEX INSERTS



Part Number	Overall Length		Notes
	IN.	MM.	

498	2 3/8	60	Magnetic
M-498	3 1/16	78	

### 5/16" HEX DRIVE



Part Number	Overall Length		Notes
	IN.	MM.	

630	1 13/16	46	For 1/4" Hex Inserts
M-630	3	76	For 1/4" Hex Inserts; Magnetic
638	2 1/2	64	For 1/4" Hex Inserts
M-638	3 3/32	79	For 1/4" Hex Inserts; Magnetic

### 5/16" BUCKEYE – DESOUTTER FOR 1/4" HEX INSERTS



Part Number	Overall Length		Notes
	IN.	MM.	

610	2	51	Magnetic
M-610	3 3/16	81	

### 7/16" HEX DRIVE



Part Number	Overall Length		Notes
	IN.	MM.	

480	2 3/4	70	For 5/16" hex inserts
488	2 3/4	70	For 1/4" hex inserts
M-488	3 1/16	78	For 1/4" hex inserts, magnetic
489	3 1/8	79	For 1/4" hex inserts
M-480	3 5/16	84	For 5/16" hex inserts, magnetic
M-480-6	6	152	For 5/16" hex inserts, magnetic

APEX has a variety of covered bit holders that provide anti-mar and safety benefits. Please refer to the u-GUARD section in this catalog.



# BIT HOLDERS

## 9/32" 130-A YANKEE TYPE FOR 1/4" HEX INSERTS



Part Number	Overall Length	
	IN.	MM.
450	2 1/4	57
M-450	3 3/8	86

## 5/16" 131-A YANKEE TYPE FOR 1/4" HEX INSERTS



Part Number	Overall Length	
	IN.	MM.
460	2 1/4	57
M-460	3 3/8	86

## 7/32" 135-A YANKEE TYPE FOR 1/4" HEX INSERTS



Part Number	Overall Length	
	IN.	MM.
M-470	3 3/8	86

## 1/4"-24 SCREW SHANK FOR 1/4" HEX INSERTS



Part Number	Overall Length	
	IN.	MM.
400-BH	1 1/8	29

## FEMALE SQUARE DRIVE

## 1/4" FEMALE SQUARE DRIVE



Part Number	Overall Length		Notes
	IN.	MM.	
825	1	25	For 1/4" Hex Inserts
M-825	2 9/32	58	For 1/4" Hex Inserts; Magnetic
820	23/32	18	For 1/4" Square Inserts

## 3/8" FEMALE SQUARE DRIVE



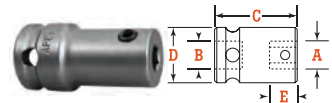
Part Number	Overall Length		Notes
	IN.	MM.	
830	1 1/2	38	For 5/16" Square Inserts
835	1 1/2	38	For 5/16" Hex Inserts
838	1 1/2	38	For 1/4" Hex Inserts
M-838	2 23/32	69	For 1/4" Hex Inserts, Magnetic
M-835	2 3/4	70	For 5/16" Hex Inserts, Magnetic

## 1/2" FEMALE SQUARE DRIVE



Part Number	Overall Length		Notes
	IN.	MM.	
850	1 3/4	45	For 5/16" Square Inserts
855	1 3/4	45	For 5/16" Hex Inserts
858	1 3/4	45	For 1/4" Hex Inserts
M-855	2 3/4	70	For 5/16" Hex Inserts, Magnetic
M-858	2 3/4	70	For 1/4" Hex Inserts, Magnetic

## BIT HOLDERS/ ADAPTERS WITH SET SCREW OR THRU HOLE



Part Number										
Set Screw Lock	Spring Pin Retainer	Spring Pin Only	Hex Opening (A) IN.	Square Drive (B) IN.	Overall Length (C) IN.	Body Dia. (D) IN.	Opening Depth (E) IN.			
SC-108	—	—	1/4	1/4	11/4	32	3/4	19	5/8	16
SC-308	—	—	1/4	3/8	11/2	38	3/4	19	5/8	16
SC-508	—	—	1/4	1/2	11/2	38	7/8	22	5/8	16
SC-114	—	—	7/16	1/4	1	25	3/4	19	17/32	13
SC-314	RP-314	21-S-156-0750	7/16	3/8	13/8	35	3/4	19	17/32	13
SC-514	RP-514	21-S-156-0937	7/16	1/2	15/8	41	15/16	24	17/32	13
SC-614	RP-614	21-S-156-0375	7/16	5/8	13/4	46	1 1/4	32	17/32	13
SC-520	RP-520	21-S-187-1125	5/8	1/2	11/2	38	1 1/8	29	11/16	17
SC-620	RP-620	21-S-187-1250	5/8	5/8	11/2	38	1 1/4	32	11/16	17
SC-720	RP-720	21-S-187-1500	5/8	3/4	1 11/16	43	1 1/2	38	11/16	17
SC-820	RP-820	21-S-187-1375	5/8	1	2 1/8	54	2 1/8	54	11/16	17
SC-724	RP-724	21-S-187-1500	3/4	3/4	2	51	1 5/8	42	7/8	22
SC-728	RP-728	21-S-187-1625	7/8	3/4	2	51	1 5/8	42	57/64	23
SC-828	RP-828	21-S-187-1625	7/8	1	2 1/8	54	2 1/8	54	5/8	23

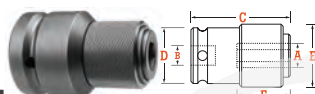
# BIT HOLDERS

## FEMALE THREADED DRIVE, QUICK RELEASING CHUCKS



Part Number	Female Thread IN.	Hex Opening IN.	Overall Length IN.	Overall Length MM.	Overall Dia. IN.	Overall Dia. MM.	Opening Depth IN.	Opening Depth MM.
QRA-08	3/8-24	1/4	1 3/4	45	3/4	19	61/64	24
QRA-14	3/8-24	7/16	2	51	1 1/4	32	11/16	27
QRF-08	1/2-20	1/4	1 3/4	45	3/4	19	61/64	24
QRF-14	1/2-20	7/16	2	51	1 1/4	32	11/16	27
QRF-20	1/2-20	5/8	2 5/8	67	1 5/8	41	11/2	38

## FEMALE SQUARE DRIVE, QUICK RELEASING CHUCKS



Part Number	Hex Opening (A) IN.	Square Drive (B) IN.	Overall Length (C) IN.	Overall Length (C) MM.	Body Dia. (D) IN.	Body Dia. (D) MM.	Sleeve Dia. (E) IN.	Sleeve Dia. (E) MM.	Opening Depth (F) IN.	Opening Depth (F) MM.
QR-108	1/4	1/4	1 1/2	38	3/4	19	3/4	19	61/64	24
QR-308	1/4	3/8	1 3/4	45	3/4	19	3/4	19	61/64	24
QR-508	1/4	1/2	2 1/8	54	7/8	22	3/4	19	61/64	24
QR-314	7/16	3/8	2	51	1	25	1 1/4	32	13/32	28
QR-514	7/16	1/2	2 1/8	54	1	25	1 1/4	32	11/16	27
QR-514-2B	7/16	1/2	2 1/8	54	1	25	1 1/4	32	11/16	27
QR-520	5/8	1/2	2 5/8	67	1 1/2	38	1 5/8	41	11/2	38
QR-614	7/16	5/8	2 1/8	54	1 1/4	32	1 1/4	32	11/16	27
QR-620	5/8	5/8	2 5/8	67	1 1/2	38	1 5/8	41	11/2	38
QR-714	7/16	3/4	2 3/8	60	1 1/2	38	1 1/4	32	11/16	27
QR-720	5/8	3/4	3 1/8	79	1 1/2	38	1 5/8	41	11/2	38
QR-820	5/8	1	3 1/4	83	2 1/8	54	1 5/8	41	11/2	38
QR-824	3/4	1	3 3/4	95	2	51	1 7/8	48	1 5/8	41

# NUTSETTERS

## 1/4" HEX DRIVE NUTSETTERS FOR SHEET METAL SCREWS

### 6 POINT POWER DRIVE, SAE



Part Number	Hex Opening IN.	Overall Length IN.	Socket Nose Dia. IN.	Nutsetter Notes
DB-08	1/4	2 9/16	7/16	Non-Magnetic
DB-10	5/16	2 9/16	1/2	Non-Magnetic
DB-12	3/8	2 9/16	9/16	Non-Magnetic
MDA-08	1/4	1 3/4	7/16	Magnetic
MDA-10	5/16	1 3/4	1/2	Magnetic
MDA-12	3/8	1 3/4	9/16	Magnetic
MDA-14	7/16	2	11/16	Magnetic
MDAT-08	1/4	1 3/4	3/8	Magnetic
MDB-08	1/4	2 9/16	7/16	Magnetic
MDB-10	5/16	2 9/16	1/2	Magnetic
MDB-12	3/8	2 9/16	9/16	Magnetic
MDB-14	7/16	2 9/16	5/8	Magnetic
MDC-08	1/4	2 9/16	7/16	Magnetic
MDC-10	5/16	2 9/16	1/2	Magnetic
MDC-12	3/8	2 9/16	9/16	Magnetic



### APEX QUICK-RELEASE BIT HOLDERS HOLD BITS SECURELY:

A quick-release bit holder allows fast, easy insert bit changes while assuring that bits stay securely in the bit holder. Simply pull back on the knurled sleeve to release the bit.

## 1/4" HEX DRIVE NUTSETTERS FOR SHEET METAL SCREWS

### 6 POINT INSERT, SAE



Part Number	Hex Opening IN.	Overall Length IN.	Socket Nose Dia. IN.	Nutsetter Notes
MHM-1310	5/16	1 1/8	1/2	Magnetic
MHM-1912	3/8	1 3/4	9/16	Magnetic

### 6 POINT INSERT, METRIC



Part Number	Hex Opening IN.	Overall Length MM.	Socket Nose Dia. MM.	Nutsetter Notes
MHM-7MM	7	31.8	11.1	Magnetic
MHM-8MM	8	31.8	12.7	Magnetic
MHM-10MM	10	31.8	14.3	Magnetic

# 1/4" HEX DRIVE NUTSETTERS FOR SHEET METAL SCREWS

## 6 POINT POWER DRIVE, SAE



Part Number	Hex Opening IN.	Overall Length IN.	Socket Nose Dia. IN.	Nutsetter Notes
MHM-1710-2	5/16	2	9/16	Magnetic
MHM-1710-4	5/16	4	9/16	Magnetic

## 6 POINT POWER DRIVE, METRIC



Part Number	Hex Opening IN.	Overall Length MM.	Socket Nose Dia. MM.	Nutsetter Notes
MDA-6mm	6	44.5	9.5	Magnetic
MDA-7mm	7	44.5	11.1	Magnetic
MDA-8mm	8	44.5	12.7	Magnetic
MDA-10mm	10	44.5	14.3	Magnetic
MDA-10mm-80m	10	80.0	14.3	Magnetic

# 1/4" HEX DRIVE NUTSETTERS

## 6 POINT AND 6 POINT MAGNETIC, SAE



Part No. 6 Point	Part No. Magnetic	Hex Size IN.	Overall Length IN.	Socket Nose Dia. IN.
6N-0806-2	M6N-0806-2	3/16	2	5/16
6N-0806-3	M6N-0806-3	3/16	3	5/16
-	M6N-0806-5	3/16	5	5/16
-	M6N-0806-6	3/16	6	5/16
-	M6N-0806-8	3/16	8	5/16
-	M6N-0806-10	3/16	10	5/16
-	M6N-0806-12	3/16	12	5/16
6N-0808-2	M6N-0808-2	1/4	2	7/16
6N-0808-3	M6N-0808-3	1/4	3	7/16
6N-0808-4	M6N-0808-4	1/4	4	7/16
6N-0808-5	M6N-0808-5	1/4	5	7/16
6N-0808-6	M6N-0808-6	1/4	6	7/16
-	M6N-0808-8	1/4	8	7/16
-	M6N-0808-10	1/4	10	7/16
-	M6N-0808-12	1/4	12	7/16
6N-0810-2	M6N-0810-2	5/16	2	1/2
6N-0810-3	M6N-0810-3	5/16	3	1/2
6N-0810-4	M6N-0810-4	5/16	4	1/2
6N-0810-5	M6N-0810-5	5/16	5	1/2
6N-0810-6	M6N-0810-6	5/16	6	1/2

## 6 POINT AND 6 POINT MAGNETIC, SAE CONTINUED



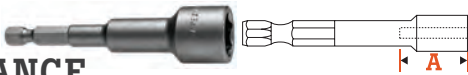
Part No. 6 Point	Part No. Magnetic	Hex Size IN.	Overall Length IN.	Socket Nose Dia. IN.
-	M6N-0810-8	5/16	8	1/2
-	M6N-0810-10	5/16	10	1/2
-	M6N-0810-12	5/16	12	1/2
6N-0811-2	M6N-0811-2	11/32	2	9/16
6N-0811-3	M6N-0811-3	11/32	3	9/16
6N-0812-2	M6N-0812-2	3/8	2	9/16
6N-0812-3	M6N-0812-3	3/8	3	9/16
6N-0812-4	M6N-0812-4	3/8	4	9/16
6N-0812-6	M6N-0812-6	3/8	6	9/16
-	M6N-0812-8	3/8	8	9/16
-	M6N-0812-8	3/8	8	9/16
-	M6N-0812-10	3/8	10	9/16
-	M6N-0812-12	3/8	12	9/16
6N-0814-2	M6N-0814-2	7/16	2	21/32
6N-0814-3	M6N-0814-3	7/16	3	21/32
6N-0814-4	M6N-0814-4	7/16	4	21/32
6N-0814-6	M6N-0814-6	7/16	6	21/32
-	M6N-0814-8	7/16	8	21/32
-	M6N-0814-10	7/16	10	21/32
-	M6N-0814-12	7/16	12	21/32
6N-0816-2	M6N-0816-2	1/2	2	3/4
6N-0816-3	M6N-0816-3	1/2	3	3/4
-	M6N-0816-8	1/2	8	3/4
-	M6N-0816-10	1/2	10	3/4
-	M6N-0816-12	1/2	12	3/4
6N-0818-2	M6N-0818-2	9/16	2	13/16

## 6 POINT AND 6 POINT MAGNETIC, METRIC



Part No. 6 Point	Part No. Magnetic	Hex Size MM.	Overall Length MM.	Socket Nose Dia. MM.
6N-08-8M-3	M6N-08-8M-3	8	76	12.7
6N-08-8M-4	M6N-08-8M-4	8	102	12.7
6N-08-8M-6	M6N-08-8M-6	8	152	12.7
-	M6N-08-8M-8	8	203.2	12.7
-	M6N-08-8M-10	8	254	12.7
-	M6N-08-8M-12	8	304.8	12.7
-	MVM-11-10MM	10	74.6	14.3
6N-08-10M-3	M6N-08-10M-3	10	76	14.3
6N-08-10M-4	M6N-08-10M-4	10	102	14.3
6N-08-10M-6	M6N-08-10M-6	10	76	14.3
-	M6N-08-10M-8	10	203.2	14.3
-	M6N-08-10M-10	10	254	14.3
-	M6N-08-10M-12	10	304.8	14.3
6N-08-10M-8	-	10	203	14.3
6N-08-12M-2	-	12	51	19
6N-08-12M-3	M6N-08-12M-3	12	76	19
6N-08-12M-4	M6N-08-12M-4	12	102	19
6N-08-12M-6	M6N-08-12M-6	12	152	19
-	M6N-08-12M-8	12	203.2	19
-	M6N-08-12M-10	12	254	19
-	M6N-08-12M-12	12	304.8	19
6N-08-12M-10	-	12	254	19
-	M6N-08-14M-8	14	203.2	20.6
-	M6N-08-14M-10	14	254	20.6
-	M6N-08-14M-12	14	304.8	20.6

## 6 POINT, BOLT CLEARANCE



Part No. 6 Point	Hex Size IN.	Overall Length IN.	Socket Nose Dia. IN.	Clearance Depth (A) IN.
6B-0808	1/4	3 1/4	7/16	13/8
6B-0809	9/32	3 1/4	1/2	13/8
6B-0810	5/16	3 1/4	1/2	13/8
6B-0811	11/32	3 1/4	9/16	13/8
6B-0812	3/8	3 1/4	9/16	13/8
6B-0814	7/16	3 1/4	21/32	13/8
6B-0816	1/2	3 1/4	3/4	13/8
6B-0818	9/16	3 1/4	13/16	13/8
6B-0820	5/8	3 1/4	7/8	13/8

## MAGNETIC BOLT CLEARANCE, 6 POINT AND DOUBLE HEX, METRIC



Part Number	Hex Size MM.	Overall Length MM.	Nose End Dia. MM.
MB6N-08-8M-4	8	102	13
MB6N-08-8M-6	8	152	13
MB6N-08-10M-12	10	305	14
MB6N-08-10M-14	10	356	14
MB6N-08-10M-2	10	51	14
MB6N-08-10M-4	10	102	14
MB6N-08-10M-5	10	127	14
MB6N-08-10M-6	10	152	14
MB6N-08-10M-8	10	203	14
MB6N-08-10M-D-6*	10	152	14
MB6N-08-12M-10	12	254	19
MB6N-08-12M-4	12	102	19
MB6N-08-12M-6	12	152	19
MB6N-08-12M-8	12	203	19
MB6N-08-13M-6	13	152	19
MB6N-08-14M-3	14	76	17
MB6N-08-14M-4	14	102	21

\* Double hex



### BOLT CLEARANCE NUTSETTERS:

Bolt clearance nutsetters allow the bolt or stud to recess into the nutsetter body as the nut is driven down. Bolt clearance nutsetters are prefixed with either 6B- or 6MB (for magnetic).

Note:

APEX Nutsetters can be available in shapes other than 6-point (SF-hex, Double Hex, 12-Point, Torx, Torx Plus, etc.) Please reach out to our Custom Solutions department.

## 7/16" HEX DRIVE NUTSETTERS

### 6 POINT



Part No. 6 Point	Hex Size IN.	Overall Length IN.	Socket Nose Dia. IN.
6N-1410-3	5/16	3	9/16
6N-1412-3	3/8	3	9/16
6N-1414-3	7/16	3	3/4
6N-1416-3	1/2	3	13/16
6N-1416-4	1/2	4	13/16
6N-1418-3	9/16	3	7/8
6N-1418-6	9/16	6	7/8
6N-1420-3	5/8	3	1
6N-1424-3	3/4	3	1 1/8
6N-1424-6	3/4	6	1 1/8

## 5/8" HEX DRIVE NUTSETTERS

### 6 POINT



Part No. 6 Point	Hex Size IN.	Overall Length IN.	Socket Nose Dia. IN.
6N-2028-4	7/8	4	1 3/8
6N-2036-4	1 1/8	4	1 5/8



# HAND DRIVERS



Part Number	Female Hex Size IN.	Overall Length IN. MM.	Blade Projection IN. MM.	Notes
M-15-SC	1/4	8 1/2 216	4 3/8 111	Phillips #1, #2, #3; Slotted 4F-5R, 10F-12R; Hollow Handle. Magnetic Without Bits; Hollow Handle. Magnetic
M-15-SC-A	1/4	8 1/2 216	4 3/8 111	



## REPLACEABLE BIT DRIVERS

Part Number	Female Hex Size IN.	Overall Length IN. MM.	Blade Projection IN. MM.
1510-P	1/4	2 3/4 70	7/8 22
1500-P	1/4	7 1/2 191	3 9/32 83

## INDUSTRIAL BIT KIT



**24BITKIT includes plastic carrying case with:**

- Magnetic hand driver and magnetic bit holder
- Phillips Bits: #1, #2, #3
- Slotted Bits: 3F-4R, 4F-5R, 6F-8R, 8F-10R, 10F-12R
- Torx® Bits: T-10, T-15, T-20, T-25, T-27, T-30, T-40
- Square Recess Bits: 3/32", 1/8"
- Hex Bits: 5/64", 3/32", 7/64", 1/8", 9/64"
- Pozidriv® Bits: #1, #2



## REPLACEABLE BIT DRIVERS – MAGNETIC

Part Number	Female Hex Size IN.	Overall Length IN. MM.	Blade Projection IN. MM.
M-1505-P	1/4	2 3/8 60	3/8 10
M-1500-P	1/4	8 1/2 216	4 3/8 111

## AWLS



Part Number	Overall Length IN. MM.	Shank Dia. IN. MM.
AW-95	7 7/16 189	.307 7.8
AW-95-L	8 203	.307 7.8
AW-95-LL	8 7/8 225	.307 7.8

## HEX POWER DRIVE ADAPTERS

### MALE HEX POWER DRIVE WITH 1/4" MALE SQUARE



Part Number	Hex Drive IN.	Type of Lock	Overall Length IN. MM.
EX-250	1/4	Pin	13/8 35
EX-250-B	1/4	Ball	13/8 35
EX-250-2	1/4	Pin	2 51
EX-250-B-2	1/4	Ball	2 51
EX-250-3	1/4	Pin	3 76
EX-250-B-3	1/4	Ball	3 76
EX-250-4	1/4	Pin	4 102
EX-250-B-4	1/4	Ball	4 102
EX-250-5	1/4	Pin	5 127
EX-250-B-5	1/4	Ball	5 127
EX-250-6	1/4	Pin	6 152
EX-250-B-6	1/4	Ball	6 152
EX-250-8	1/4	Pin	8 203
EX-250-B-8	1/4	Ball	8 203
EX-250-10	1/4	Pin	10 254
EX-250-12	1/4	Pin	12 305
EX-250-B-12	1/4	Ball	12 305
EX-250-14	1/4	Pin	14 356
EX-250-18	1/4	Pin	18 457
EX-250-22	1/4	Pin	22 559

# HEX POWER DRIVE ADAPTERS

## MALE HEX DRIVE WITH 3/8" MALE SQUARE



Part Number	Hex Drive IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-370	1/4	Pin	1 5/8	41
EX-370-B	1/4	Ball	1 5/8	41
EX-370-2	1/4	Pin	2	51
EX-370-B-2	1/4	Ball	2	51
EX-370-3	1/4	Pin	3	76
EX-370-B-3	1/4	Ball	3	76
EX-370-4	1/4	Pin	4	102
EX-370-B-4	1/4	Ball	4	102
EX-370-5	1/4	Pin	5	127
EX-370-6	1/4	Pin	6	152
EX-370-B-6	1/4	Ball	6	152
EX-370-8	1/4	Pin	8	203
EX-370-B-8	1/4	Ball	8	203
EX-370-10	1/4	Pin	10	254
EX-370-B-10	1/4	Ball	10	254
EX-370-12	1/4	Pin	12	305
EX-370-18	1/4	Pin	18	457
EX-380	5/16	Pin	1 1/2	38
EX-380-B	5/16	Ball	1 1/2	38
EX-380-2	5/16	Pin	2	51
EX-380-B-2	5/16	Ball	2	51
EX-380-3	5/16	Pin	3	76
EX-380-4	5/16	Pin	4	102
EX-380-6	5/16	Pin	6	152
EX-371	7/16	Pin	1 3/4	45
EX-371-2	7/16	Pin	2	51
EX-371-2 3/4	7/16	Pin	2 3/4	70
EX-371-3	7/16	Pin	3	76
EX-371-B-3	7/16	Ball	3	76
EX-371-4	7/16	Pin	4	102
EX-371-5	7/16	Pin	5	127
EX-371-6	7/16	Pin	6	152
EX-371-8	7/16	Pin	8	203
EX-371-10	7/16	Pin	10	254
EX-371-12	7/16	Pin	12	305
EX-371-15	7/16	Pin	15	381

## MALE HEX POWER DRIVE WITH 1/2" MALE SQUARE



Part Number	Hex Size IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-500-2	1/4	Pin	2	51
EX-500-B-2	1/4	Ball	2	51
EX-500-3	1/4	Pin	3	76
EX-500-B-3	1/4	Ball	3	76
EX-500-4	1/4	Pin	5	102
EX-500-B-4	1/4	Ball	4	102
EX-500-6	1/4	Pin	6	152
EX-500-B-6	1/4	Ball	6	152
EX-512-2	5/16	Pin	2	51
EX-512-B-2	5/16	Ball	2	51
EX-512-3	5/16	Pin	3	76
EX-512-B-4	5/16	Ball	4	102
EX-501-2	7/16	Pin	2 1/8	54
EX-501-B-2	7/16	Ball	2 1/8	54
EX-501-3	7/16	Pin	3	76
EX-501-B-3	7/16	Ball	3	76
EX-501-4	7/16	Pin	4	102
EX-501-B-4	7/16	Ball	4	102
EX-501-5	7/16	Pin	5	127
EX-501-B-5	7/16	Ball	5	127
EX-501-6	7/16	Pin	6	152
EX-501-B-6	7/16	Ball	6	152
EX-501-8	7/16	Pin	8	203
EX-501-B-8	7/16	Ball	8	203
EX-501-10	7/16	Pin	10	254
EX-501-B-10	7/16	Ball	10	254
EX-501-12	7/16	Pin	12	305
EX-501-B-12	7/16	Ball	12	305
EX-501-15	7/16	Pin	15	381
EX-502	5/8	Pin	2	51
EX-502-B	5/8	Ball	2	51
EX-502-3	5/8	Pin	3	76
EX-502-B-3	5/8	Ball	3	76
EX-502-B-4	5/8	Ball	4	102
EX-502-5	5/8	Pin	5	127
EX-502-6	5/8	Pin	6	152
EX-502-8	5/8	Pin	8	203

## MALE HEX POWER DRIVE WITH 5/8" MALE SQUARE



Part Number	Hex Size IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-620-3	7/16	Pin	3	76
EX-621-3	5/8	Pin	3	76
EX-621-B-3	5/8	Ball	3	76
EX-621-6	5/8	Pin	6	152
EX-621-8	5/8	Pin	8	203

# HEX POWER DRIVE ADAPTERS

## MALE HEX POWER DRIVE WITH 3/4" MALE SQUARE



Part Number	Hex Size IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-757-3	7/16	7/32 Drill Hole	3	76
EX-757-B-3	7/16	Ball	3	76
EX-758-4	5/8	7/32 Drill Hole	4	102
EX-758-B-4	5/8	Ball	4	102
EX-758-6	5/8	7/32 Drill Hole	6	152
EX-758-9	5/8	7/32 Drill Hole	9	229

# THREADED ADAPTERS

## THREADED SCREW SHANK



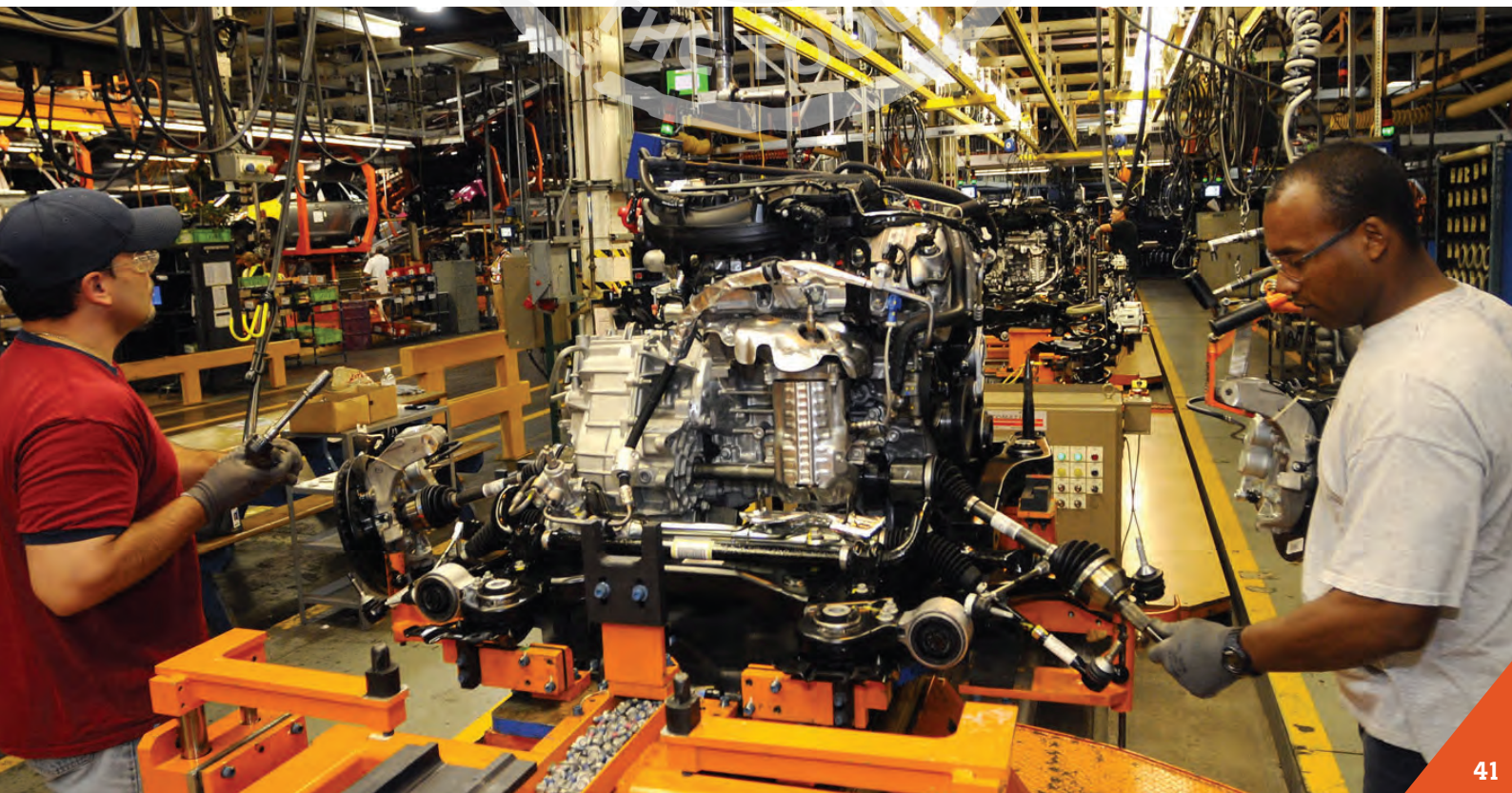
Part Number	Male Square IN.	Male Thread IN.	Overall Length		Body Diameter	
			IN.	MM.	IN.	MM.
TH-256	1/4	1/4-28	1 5/8	41	7/16	11
TH-376	3/8	1/4-28	1 5/8	41	1/2	13
TH-250	1/4	1/4-28	1 5/8	41	7/16	11
TH-370	3/8	1/4-28	1 3/4	45	1/2	13
TH-372	3/8	1/4-28	1 3/4	45	1/2	13

# HEX DRIVE UNIVERSAL ADAPTERS

## MALE HEX TO MALE SQUARE



Part Number Standard	Tension	Male Square IN.	Male Hex IN.	Type of Lock	Overall Length		Largest Dia.	
					IN.	MM.	IN.	MM.
-	KSM-25-3	1/4	1/4	Pin	3	76	5/8	15.9
-	KSM-25-6	1/4	1/4	Pin	6	152	5/8	15.9
-	KSM-25-8	1/4	1/4	Pin	8	203	5/8	15.9
-	KSM-25-9	1/4	1/4	Pin	9	229	5/8	15.9
KCM-25-B-6	KSM-25-B-6	1/4	1/4	Ball	6	152	5/8	15.9
KCM-37-6	KSM-37-6	3/8	1/4	Pin	6	152	3/4	19.1
-	KSM-37-B-6	3/8	1/4	Ball	6	152	3/4	19.1
KCM-37-9	-	3/8	1/4	Pin	9	229	3/4	19.1







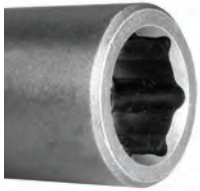
## SOCKETS, UNIVERSAL WRENCHES, EXTENSIONS, AND ADAPTERS



// MACHINED FROM HIGH  
CARBON ALLOY STEEL  
AND DESIGNED TO MEET  
OR EXCEED LICENSOR  
STANDARDS, RESULTING  
IN TIGHTER TOLERANCES  
AND SUPERIOR PRODUCT  
QUALITY & CONSISTENCY.



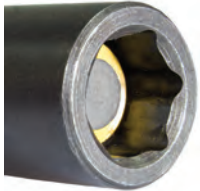
# SOCKET TYPES



## IMPACT SOCKETS



Industrial grade impact sockets are available in a wide range of lengths and wall thicknesses, and with single or double hex openings. Square openings are available in select sizes.

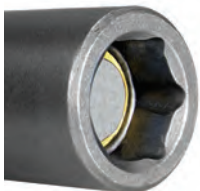


## FIXED MAGNETIC IMPACT SOCKETS



**M PREFIX**

Magnetic sockets hold the fastener in driving position, even when working straight down. Time-wasting motions are eliminated when starting fasteners or working in hard-to-reach areas.

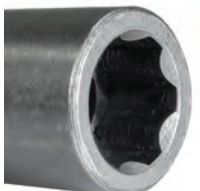


## MAGNETIC BOLT CLEARANCE IMPACT SOCKETS



**MB PREFIX**

As the nut is run down, a spring-loaded or hollow cylinder magnet allows the bolt or stud to retract into the socket body. Nuts are held firmly in the socket.

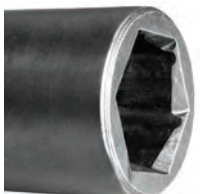


## SURFACE DRIVE SOCKETS



**SF PREFIX**

Large openings on the six corners of the hex end opening create a "floating" action that allows the socket to slip quickly and easily onto the nut or bolt. Ideal for compensating for imperfect alignment between the tool and fastener. Not generally recommended for impact use.



## FAST LEAD IMPACT SOCKETS



**FL PREFIX**

Designed for power tool and multiple spindle power tools, a specially tapered opening provides complete engagement with the nut almost instantly upon engagement. This speeds productivity and extends tool life. Engagement is possible without starting and stopping the tool for each nut.



## EXTENSIONS & ADAPTERS

A wide range of accessories are available to adapt sockets to nearly every tool and application.

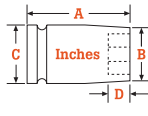


## SQUARE DRIVE UNIVERSAL WRENCHES

Designed to provide access in hard-to-reach fastening applications.

# 1/4" SQUARE DRIVE SOCKETS, SAE

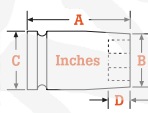
## STANDARD LENGTH, 6 POINT AND DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
1105	-	5/32	7/8	1/4	1/2	3/32
1106	1106-D	3/16	7/8	5/16	1/2	3/32
1107	1107-D	7/32	7/8	3/8	1/2	5/32
1108	1108-D	1/4	7/8	3/8	1/2	5/32
X-1108*	-	1/4	7/8	3/8	1/2	5/32
HA-510	-	5/16	7/8	7/16	7/16	3/16
1109	1109-D	9/32	1	7/16	1/2	3/16
1110	1110-D	5/16	1	1/2	1/2	3/16
X-1110*	-	5/16	1	1/2	1/2	3/16
1111	1111-D	11/32	1	9/16	9/16	3/16
1112	1112-D	3/8	1	9/16	9/16	1/4
1113	-	13/32	1	5/8	5/8	1/4
1114	1114-D	7/16	1	5/8	5/8	9/32
1116	1116-D	1/2	1	11/16	11/16	11/32
1118	-	9/16	1	13/16	13/16	7/16
1120	-	5/8	1	7/8	7/8	7/16

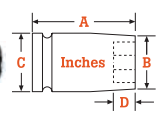
\* Parts have a harder heat treat

## LONG LENGTH, 6 POINT AND DOUBLE HEX



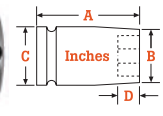
Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
1206	1206-D	3/16	1 3/4	5/16	1/2	3/32
1207	-	7/32	1 3/4	3/8	1/2	5/32
1208	1208-D	1/4	1 3/4	3/8	1/2	5/32
1209	1209-D	9/32	1 3/4	7/16	1/2	3/16
1210	1210-D	5/16	1 3/4	1/2	1/2	3/16
1211	-	11/32	1 3/4	9/16	9/16	3/16
1212	1212-D	3/8	1 3/4	9/16	9/16	1/4
1213	-	13/32	1 3/4	5/8	5/8	1/4
1214	-	7/16	1 3/4	5/8	5/8	9/32
1216	1216-D	1/2	1 3/4	11/16	11/16	11/32
1218	-	9/16	1 3/4	13/16	13/16	7/16

## EXTRA LONG LENGTH, 6 POINT AND DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
1308	1308-D	1/4	3	3/8	1/2	5/32
1310	-	5/16	3	1/2	1/2	3/16
1311	1311-D	11/32	3	1/2	1/2	3/16
1312	-	3/8	3	9/16	9/16	1/4
1313	-	13/32	3	9/16	9/16	1/4
1314	-	7/16	3	5/8	5/8	9/32
1316	-	1/2	3	11/16	11/16	11/32
1318	-	9/16	3	13/16	13/16	7/16
1320	-	5/8	3	7/8	7/8	7/16

## MAGNETIC, STANDARD LENGTH, 6 POINT



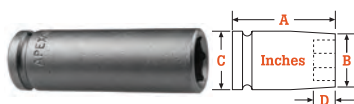
Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
M-1105	5/32	7/8	5/16	1/2	3/32
M-1106	3/16	7/8	5/16	1/2	3/32
M-1107	7/32	7/8	3/8	1/2	5/32
MX-1108*	1/4	7/8	3/8	1/2	5/32
M-1108-E*	1/4	7/8	3/8	1/2	5/32
MX-1108-E*	1/4	7/8	3/8	1/2	5/64
MHA-4108*	1/4	7/8	3/8	3/8	5/64
MHA-510**	5/16	7/8	7/16	7/16	1/8
MX-1109*	9/32	1	7/16	1/2	3/16
MHA-1310	5/16	1	7/16	1/2	1/8
M-1110	5/16	1	1/2	1/2	3/16
MX-1110*	5/16	1	1/2	1/2	3/16
MX-1111	11/32	1	1/2	1/2	3/16
M-1112*	3/8	1	9/16	9/16	1/4
MX-1112	3/8	1	9/16	9/16	1/4
M-1114	7/16	1	5/8	5/8	9/32
M-1116	1/2	1	11/16	11/16	11/32
M-1118	9/16	1	11/16	11/16	11/32

\* Parts have a harder heat treat; MX-1108-E has no lead-in chamfer.

\*\* No DIN groove

# 1/4" SQUARE DRIVE SOCKETS, SAE

## MAGNETIC, LONG & EXTRA LONG LENGTH, 6 POINT



Part No. 6 Point	Part No. Bolt Clearance	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	MB-1206	3/16	1 3/4	5/16	1/2	5/32
M-1208	MB-1208	1/4	1 3/4	3/8	1/2	5/32
-	MB-1308	1/4	3	3/8	1/2	5/32
M-1209	MB-1209	9/32	1 3/4	7/16	1/2	3/16
M-1210	MB-1210	5/16	1 3/4	1/2	1/2	3/16
-	MB-1211	11/32	1 3/4	9/16	9/16	3/16
-	MB-1311	11/32	3	1/2	1/2	3/16
M-1212	MB-1212	3/8	1 3/4	9/16	9/16	1/4
-	MB-1312	3/8	3	9/16	9/16	1/4
M-1214	MB-1214	7/16	1 3/4	5/8	5/8	9/32
-	MB-1314	7/16	3	5/8	5/8	9/32
-	MB-1216	1/2	1 3/4	11/16	11/16	11/32
-	MB-1218	9/16	1 3/4	13/16	13/16	7/16

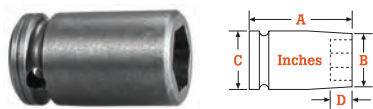
## SURFACE DRIVE & FAST LEAD, STANDARD & LONG LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	FL-1108	1/4	7/8	3/8	1/2	5/32
-	FL-1212	3/8	1 3/4	9/16	9/16	1/4
-	FL-1109	9/32	7/8	3/8	1/2	5/32
-	FL-1110	5/16	1	1/2	1/2	3/16
SF-1112	FL-1112	3/8	1	9/16	9/16	1/4
-	FL-1114	7/16	1	5/8	5/8	9/32
-	FL-1214	7/16	1 3/4	5/8	5/8	9/32
SF-1116	FL-1116	1/2	1	11/16	11/16	11/32
-	FL-1216	1/2	1 3/4	11/16	11/16	11/32

# 1/4" SQ. DR. SOCKETS FOR SAE SHEET METAL SCREWS

## 6 POINT & 6 POINT MAGNETIC, FOR PREDRILLED HOLES\*



Part No. 6 Point	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	M1E06	3/16	7/8	5/16	1/2	3/32
-	M1E07	7/32	7/8	3/8	1/2	5/32
1E08	M1E08	1/4	7/8	3/8	1/2	5/32
1E10	M1E10	5/16	7/8	1/2	1/2	3/16
-	M1E11	11/32	1	1/2	1/2	3/16
-	M1E12	3/8	1	5/8	5/8	1/4
-	M1E14	7/16	1	11/16	11/16	9/32
-	M1E16	1/2	1	11/16	11/16	11/32

\* Sockets for predrilled holes are intermediate hardness.

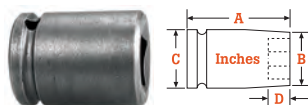
## 6 POINT & 6 POINT MAGNETIC, FOR SELF-DRILLING & TAPPING SCREWS\*



Part No. 6 Point	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
1P06	M1P06	3/16	7/8	5/16	1/2	3/32
1P07	M1P07	7/32	7/8	3/8	1/2	5/32
1P08	M1P08	1/4	7/8	7/16	1/2	5/32
-	M1P09	9/32	7/8	1/2	1/2	3/16
1P10	M1P10	5/16	7/8	1/2	1/2	3/16
1P11	M1P11	11/32	1	1/2	1/2	3/16
1P12	M1P12	3/8	1	5/8	5/8	1/4
1P14	M1P14	7/16	1	11/16	11/16	9/32
1P16	M1P16	1/2	1	11/16	11/16	11/32
-	M1A08	1/4	7/8	7/16	1/2	5/64

# 1/4" SQUARE DRIVE SOCKETS FOR SAE SQUARE NUTS

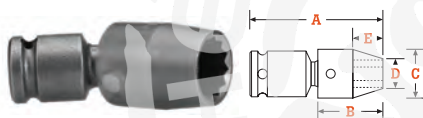
## SINGLE SQUARE & DOUBLE SQUARE



Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
1608	1608-D	1/4	1	1/2	1/2	3/16
1612	1612-D	3/8	1	3/4	3/4	1/4

# 1/4" SQUARE DRIVE UNIVERSAL WRENCHES, SAE

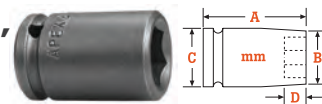
## 6 POINT AND DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
SA-25	SA-25-D	1/4	1 7/32	3/4	5/8	3/8	3/8
SA-26	SA-26-D	5/16	1 17/32	3/4	5/8	7/16	3/8
SA-28	SA-28-D	3/8	1 19/32	13/16	5/8	17/32	7/16
SA-29	SA-29-D	7/16	1 21/32	7/8	5/8	5/8	1/2
SA-30	SA-30-D	1/2	1 21/32	7/8	11/16	11/16	1/2
SA-65	-	9/16	1 21/32	7/8	11/16	11/16	1/2

# 1/4" SQUARE DRIVE SOCKETS, METRIC

## STANDARD LENGTH, 6 POINT AND DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
3.5MM11	-	3.5	22.2	6.4	12.7	2.4
4MM11	-	4	22.2	6.4	12.7	2.4
4.5MM11	-	4.5	22.2	7.9	12.7	2.4
5MM11	-	5	22.2	8.7	12.7	3.9
5.5MM11	-	5.5	22.2	9.5	12.7	3.9
6MM11	6MM11-D	6	22.2	9.5	12.7	3.9
7MM11	7MM11-D	7	22.2	11.1	12.7	4.8
8MM11	8MM11-D	8	25.4	12.7	12.7	4.8
9MM11	9MM11-D	9	25.4	14.3	14.3	4.8
10MM11	10MM11-D	10	25.4	15.9	15.9	6.4
OS-10MM11	-	10	25.4	14.3	14.3	6.4
11MM11	11MM11-D	11	25.4	15.9	15.9	7.2
12MM11	12MM11-D	12	25.4	17.5	17.5	7.2
13MM11	13MM11-D	13	25.4	19.1	19.1	8.7
14MM11	14MM11-D	14	25.4	20.6	20.6	11.1
15MM11	-	15	25.4	22.2	22.2	11.1
16MM11	-	16	25.4	22.2	22.2	11.1

## LONG LENGTH, 6 POINT AND DOUBLE HEX

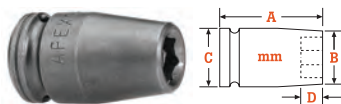


Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
5MM21	-	5	44.4	8.7	12.7	3.9
5.5MM21	-	5.5	44.4	9.5	12.7	3.9
6MM21	-	6	44.4	9.5	12.7	3.9
7MM21	-	7	44.4	11.1	12.7	4.8
8MM21	8MM21-D	8	44.4	12.7	12.7	4.8
9MM21	9MM21-D	9	44.4	14.3	14.3	4.8
10MM21	10MM21-D	10	44.4	15.9	15.9	6.4
11MM21	-	11	44.4	15.9	15.9	7.2
12MM21	-	12	44.4	17.5	17.5	7.2
13MM21	13MM21-D	13	44.4	19.1	19.1	8.7
14MM21	-	14	44.4	20.6	20.6	11.1
15MM21	15mm21-D	15	50.8	22.2	22.2	11.1
16MM21	-	16	50.8	22.2	22.2	11.1



# 1/4" SQUARE DRIVE SOCKETS, METRIC

## MAGNETIC, STANDARD LENGTH, 6 POINT



Part No. Fixed Magnet	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-5MM11	5	22.2	8.7	12.7	3.9
M-5.5MM11	5.5	22.2	9.5	12.7	3.9
M-6MM11	6	22.2	9.5	12.7	3.9
M-7MM11	7	22.2	11.9	12.7	4.8
MVA-20-7MM	7	22.2	10.5	10.5	4.8
M-8MM11	8	25.4	12.7	12.7	4.8
M-9MM11	9	25.4	14.3	14.3	4.8
M-10MM11	10	25.4	15.9	15.9	6.4
M-11MM11	11	25.4	15.9	15.9	7.2
M-12MM11	12	25.4	17.5	17.5	7.2
M-13MM11	13	25.4	19.1	19.1	8.7
M-14MM11	14	25.4	20.6	20.6	11.1
M-15MM11	15	25.4	22.2	22.2	11.1

## MAGNETIC, LONG LENGTH, 6 POINT



Part No. Fixed Magnet	Part No. Magnetic Bolt Clearance	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
-	MB-5MM21	5	44.4	8.7	12.7	3.9
-	MB-5.5MM21	5.5	44.4	9.5	12.7	3.9
M-6MM21	MB-6MM21	6	44.4	9.5	12.7	3.9
M-7MM21	MB-7MM21	7	44.4	11.9	12.7	4.8
M-8MM21	MB-8MM21	8	44.4	12.7	12.7	4.8
M-9MM21	MB-9MM21	9	44.4	14.3	14.3	4.8
M-10MM21	MB-10MM21	10	44.4	15.9	15.9	6.4
-	OSMB-10MM21	10	44.4	14.2	14.2	6.4
M-11MM21	MB-11MM21	11	44.4	15.9	15.9	7.2
M-12MM21	MB-12MM21	12	44.4	17.5	17.5	7.2
M-13MM21	MB-13MM21	13	44.4	19.1	19.1	8.7
-	MB-14MM21	14	44.4	20.6	20.6	11.1
-	MB-15MM21	15	50.8	22.2	22.2	11.1
-	MB-16MM21	16	50.8	22.2	22.2	11.1

## SURFACE DRIVE, STANDARD AND LONG LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-8MM11	8	25.4	12.7	12.7	4.7
SF-10MM11	10	25.4	15.9	15.9	6.4
SF-10MM21	10	44.4	15.9	15.9	6.4
SF-12MM21	11	44.4	17.5	15.9	7.2
SF-13MM11	13	25.4	19.1	19.1	8.7
SF-13MM21	13	44.4	19.1	19.1	8.7
SF-15MM11	15	25.4	22.2	22.2	11.1

## 1/4" SQ. DR. SOCKETS FOR METRIC SHEET METAL SCREWS

### 6 POINT AND 6 POINT MAGNETIC

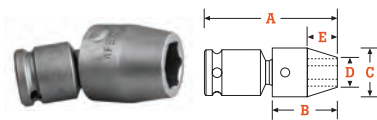


Part No. 6 Point	Part No. Fixed Magnet	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
3.5MME1	-	3.5	22.2	6.4	12.7	2.4
4MME1	M-4MME1	4	22.2	6.4	12.7	2.4
-	M-5MME1	5	22.2	8.7	12.7	3.9
5.5MME1	M-5.5MME1	5.5	22.2	9.5	12.7	3.9
6MME1	M-6MME1	6	22.2	9.5	12.7	3.9
7MME1	M-7MME1	7	22.2	11.1	12.7	4.8
-	MR-7MME1*	7	22.2	11.1	12.7	4.8
8MME1	M-8MME1	8	25.4	12.7	12.7	4.8
9MME1	M-9MME1	9	25.4	14.3	14.3	4.8
10MME1	M-10MME1	10	25.4	15.9	15.9	6.4
11MME1	M-11MME1	11	25.4	17.5	17.5	7.2
12MME1	M-12MME1	12	25.4	17.5	17.5	7.2
13MME1	M-13MME1	13	25.4	19.1	19.1	8.7

\* MR-7MME1 has stronger magnet

# 1/4" SQUARE DRIVE UNIV. WRENCHES, METRIC

## 6 POINT



Part No. 6 Point	Hex Opening MM.	Overall Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
SA-15-6M	6	31	19.1	15.9	9.5	9.5
SA-15-7M	7	31	19.1	15.9	10.3	9.5
SA-16-8M	8	38	19.1	19.1	11.1	7.9
SA-16-10M	10	40	20.6	19.1	15.1	9.5

Maximum operating angle when using Universal Wrench is 30 degrees.

# 1/4" SQUARE DR. SOCKETS FOR SPLINE FASTENERS

## STANDARD AND LONG LENGTH



Part Number	Spline Size	Nominal Size IN.	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
CMS-1507	7	7/32	2 51	21/64 8	7/16 11
CMS-1408	8	1/4	7/8 22	3/8 10	7/16 11
CMS-1508	8	1/4	2 51	3/8 10	7/16 11
CMS-1409	9	9/32	7/8 22	7/16 11	7/16 11
CMS-1509	9	9/32	2 51	7/16 11	7/16 11
CMS-1410	10	5/16	7/8 22	29/64 12	29/64 12
CMS-1510	10	5/16	2 51	29/64 12	29/64 12
CMS-1412	12	3/8	7/8 22	17/32 14	17/32 14
CMS-1414	14	7/16	1 25	39/64 16	39/64 16



## APEX SPLINE SOCKETS:

APEX Spline Sockets conform to military specifications MS-37787 and MIL-W-8982C.

# 1/4" SQUARE DRIVE TORX® SOCKETS

## FOR EXTERNAL TORX SCREWS



Part Number	Part No. Fixed Magnet	Driver Size	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
TX-1104	—	E4	1 25.4	1/4 6.4	1/2 12.7
TX-1105	—	E5	1 25.4	1/4 6.4	1/2 12.7
TX-1106	—	E6	1 25.4	5/16 7.9	1/2 12.7
TX-1108	—	E8	1 25.4	3/8 9.5	1/2 12.7
TX-1110	MTX-1110	E10	1 25.4	9/16 14.3	9/16 14.3
TX-1112	—	E12	1 25.4	5/8 15.9	5/8 15.9

## FOR EXTERNAL TORX SCREWS, THIN WALL



Part Number	Part No. Fixed Magnetic	Driver Size	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
TX-1404	—	E4	1 25.4	1/4 6.4	1/2 12.7
TX-1405	—	E5	1 25.4	1/4 6.4	1/2 12.7
—	MTX-1405	E5	7/8 22.2	1/4 6.4	7/16 11.1
TX-1406	—	E6	1 25.4	5/16 7.9	1/2 12.7
TX-1407	—	E7	1 25.4	5/16 7.9	1/2 12.7
TX-1408	—	E8	1 25.4	3/8 9.5	1/2 12.7
TX-1410	—	E10	1 25.4	1/2 12.7	1/2 12.7
TX-1411	—	E11	1 25.4	1/2 12.7	1/2 12.7
TX-1412	—	E12	1 25.4	9/16 14.3	9/16 14.3

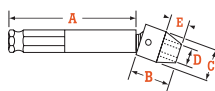
## FOR TORX NUTS



Part Number	Driver Size	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
TX-1E05	E5	7/8 22.2	3/8 9.5	1/2 12.7
TX-1E06	E6	7/8 22.2	7/16 11.1	1/2 12.7
TX-1E08	E8	7/8 22.2	1/2 12.7	1/2 12.7

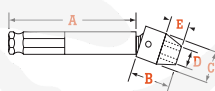
# 1/4" MALE HEX UNIVERSAL WRENCHES

## SAE 6 POINT, STANDARD & TENSION TYPE – EXTENSION



Part Number	Part No. Tension	Hex Opening IN.	Shank Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
KC-25-3	–	1/4	3	3/4	5/8	3/8	3/8
KC-25-4	–	1/4	4	3/4	5/8	3/8	3/8
KC-25-6	KS-25-6	1/4	6	3/4	5/8	3/8	3/8
KC-25-9	–	1/4	9	3/4	5/8	3/8	3/8
KC-25-12	–	1/4	12	3/4	5/8	3/8	3/8
KC-26-3	–	5/16	3	3/4	5/8	7/16	3/8
KC-26-6	KS-26-6	5/16	6	3/4	5/8	7/16	3/8
KC-26-9	–	5/16	9	3/4	5/8	7/16	3/8
KC-26-12	KS-26-12	5/16	12	3/4	5/8	7/16	3/8
–	KS-100-6	5/16	6	3/4	3/4	7/16	5/16
KC-27-3	–	11/32	3	3/4	5/8	1/2	3/8
KC-27-6	–	11/32	6	3/4	5/8	1/2	3/8
KC-28-3	–	3/8	3	13/16	5/8	9/16	7/16
KC-28-6	KS-28-6	3/8	6	13/16	5/8	9/16	7/16
KC-29-3	–	7/16	3	7/8	5/8	5/8	1/2
–	KS-28-12	3/8	12	13/16	5/8	9/16	7/16
–	KS-102-6	3/8	6	13/16	3/4	9/16	3/8
KC-29-6	KS-29-6	7/16	6	7/8	5/8	3/8	1/2
KC-30-3	–	1/2	3	7/8	11/16	11/16	1/2
KC-30-4	–	1/2	4	7/8	11/16	11/16	1/2
KC-30-6	KS-30-6	1/2	6	7/8	11/16	11/16	1/2
KC-30-9	–	1/2	9	7/8	11/16	11/16	1/2
KC-101-6	–	11/32	6	3/4	3/4	15/32	5/16
–	KS-104-6	1/2	6	1	3/4	3/4	9/16
KC-105-6	KS-105-6	9/16	6	1	13/16	13/16	9/16
–	KS-105-9	9/16	9	1	13/16	13/16	9/16

## METRIC 6 POINT, STANDARD & TENSION TYPE – EXTENSION



Part Number	Part No. Tension	Hex Opening MM.	Shank Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
KC-5-7M-4	–	7	102	19.1	15.9	10.3	9.5
KC-5-7M-6	KS-5-7M-6	7	152	19.1	15.9	10.3	9.5
–	KS-5-7M-9	7	229	19.1	15.9	10.3	9.5
KC-6-8M-3	–	8	76	19.1	19.1	11.1	7.9
KC-6-8M-4	–	8	102	19.1	19.1	11.1	7.9
KC-6-8M-6	KS-6-8M-6	8	152	19.1	19.1	11.1	7.9
KC-6-8M-9	KS-6-8M-9	8	229	19.1	19.1	11.1	7.9
KC-6-9M-6	–	9	152	19.1	19.1	12.7	7.9
KC-6-10M-3	–	10	76	20.6	19.1	15.1	9.5
KC-6-10M-4	–	10	102	20.6	19.1	15.1	9.5
KC-6-10M-6	KS-6-10M-6	10	152	20.6	19.1	15.1	9.5
–	KS-6-10M-9	10	229	20.6	19.1	15.1	9.5
KC-6-10M-12	–	10	305	20.6	19.1	15.1	9.5
KC-7-11M-6	KS-7-11M-6	11	152	23.8	22.2	15.1	10.3
KC-7-12M-3	–	12	76	23.8	22.2	15.1	10.3
KC-7-12M-6	–	12	152	23.8	22.2	15.1	10.3
KC-7-12M-9	–	12	229	23.8	22.2	15.1	10.3
KC-7-13M-3	–	13	76	25.4	22.2	15.1	11.9
KC-7-13M-6	KS-7-13M-6	13	152	25.4	22.2	15.1	11.9
KC-7-13M-9	KS-7-13M-9	13	229	25.4	22.2	15.1	11.9

### APEX UNIVERSAL WRENCHES & SOCKETS:

Meet the Minimum Proof Torque requirements specified in ASME impact standards B107.2, B107.33M and B107.110. Maximum operating angle is 30 degrees for Universal Wrenches.



## 1/4" SQUARE DR. EXTENSIONS

7/8" TO 14"  
LENGTH



Part Number	Male Square IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-252	1/4	Pin	7/8	22
EX-252-B	1/4	Ball	7/8	25
EX-255-2	1/4	Pin	2	51
EX-255-B-2	1/4	Ball	2	51
EX-255-3	1/4	Pin	3	76
EX-255-4	1/4	Pin	4	102
EX-255-B-4	1/4	Ball	4	102
EX-255-6	1/4	Pin	6	152
EX-255-B-6	1/4	Ball	6	152
EX-255-8	1/4	Pin	8	203
EX-255-10	1/4	Pin	10	254
EX-255-12	1/4	Pin	12	305
EX-255-14	1/4	Pin	14	356

## 1/4" SQUARE DRIVE UNIVERSAL ADAPTERS

### FEMALE SQUARE TO MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Largest Dia.		Overall Length	
				IN.	MM.	IN.	MM.
MF-25	1/4	1/4	Pin	5/8	16	15/8	41
MF-25-B	1/4	1/4	Ball	5/8	16	15/8	41



### APEX UNIVERSAL WRENCHES & SOCKETS:

APEX Universal Wrenches and Sockets meet the Minimum Proof Torque requirements specified in ASME impact standards B107.2, B107.33M and B107.110. Maximum operating angle is 30 degrees for Universal Wrenches.

## 1/4" SQUARE DR. ADAPTERS

1/4" FEMALE SQ. TO  
3/8" MALE SQ.



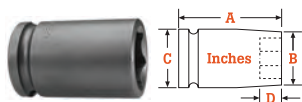
Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length	
				IN.	MM.
EX-372	1/4	3/8	Pin	1	25.4
EX-372-B	1/4	3/8	Ball	1	25.4





# 3/8" SQUARE DRIVE SOCKETS, SAE

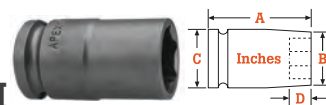
## 6 POINT & DOUBLE HEX, SHORT & STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
3108	3108-D	1/4	11/4	7/16	3/4	5/32
3109	3109-D	9/32	11/4	7/16	3/4	3/16
3010	-	5/16	7/8	1/2	3/4	3/16
3110	3110-D	5/16	11/4	1/2	3/4	3/16
3111	-	11/32	11/4	1/2	3/4	3/16
3012	3012-D	3/8	7/8	19/32	3/4	3/16
3112	3112-D	3/8	11/4	19/32	3/4	1/4
3113	3113-D	13/32	11/2	11/16	3/4	1/4
3014	3014-D	7/16	7/8	11/16	3/4	9/32
3114	3114-D	7/16	11/2	11/16	3/4	9/32
3016	3016-D	1/2	7/8	13/16	13/16	5/16
3116	3116-D	1/2	11/2	13/16	13/16	11/32
3117	-	17/32	11/2	13/16	13/16	11/32
3018	3018-D	9/16	7/8	7/8	7/8	5/16
3118	3118-D	9/16	11/2	7/8	7/8	7/16
3119	-	19/32	11/2	7/8	7/8	7/16
3020	3020-D	5/8	1	15/16	15/16	7/16
3120	3120-D	5/8	11/2	15/16	15/16	7/16
3022	3022-D	11/16	1	1	1	7/16
3122	-	11/16	11/2	1	1	7/16
3024	3024-D	3/4	1	11/16	11/16	7/16
3124	3124-D	3/4	11/2	11/16	11/16	15/32
3126	-	13/16	11/2	11/8	11/8	7/16
3028	3028-D	7/8	1	11/4	11/4	7/16
-	HC-3816*	1/2	11/2	11/16	11/16	11/32

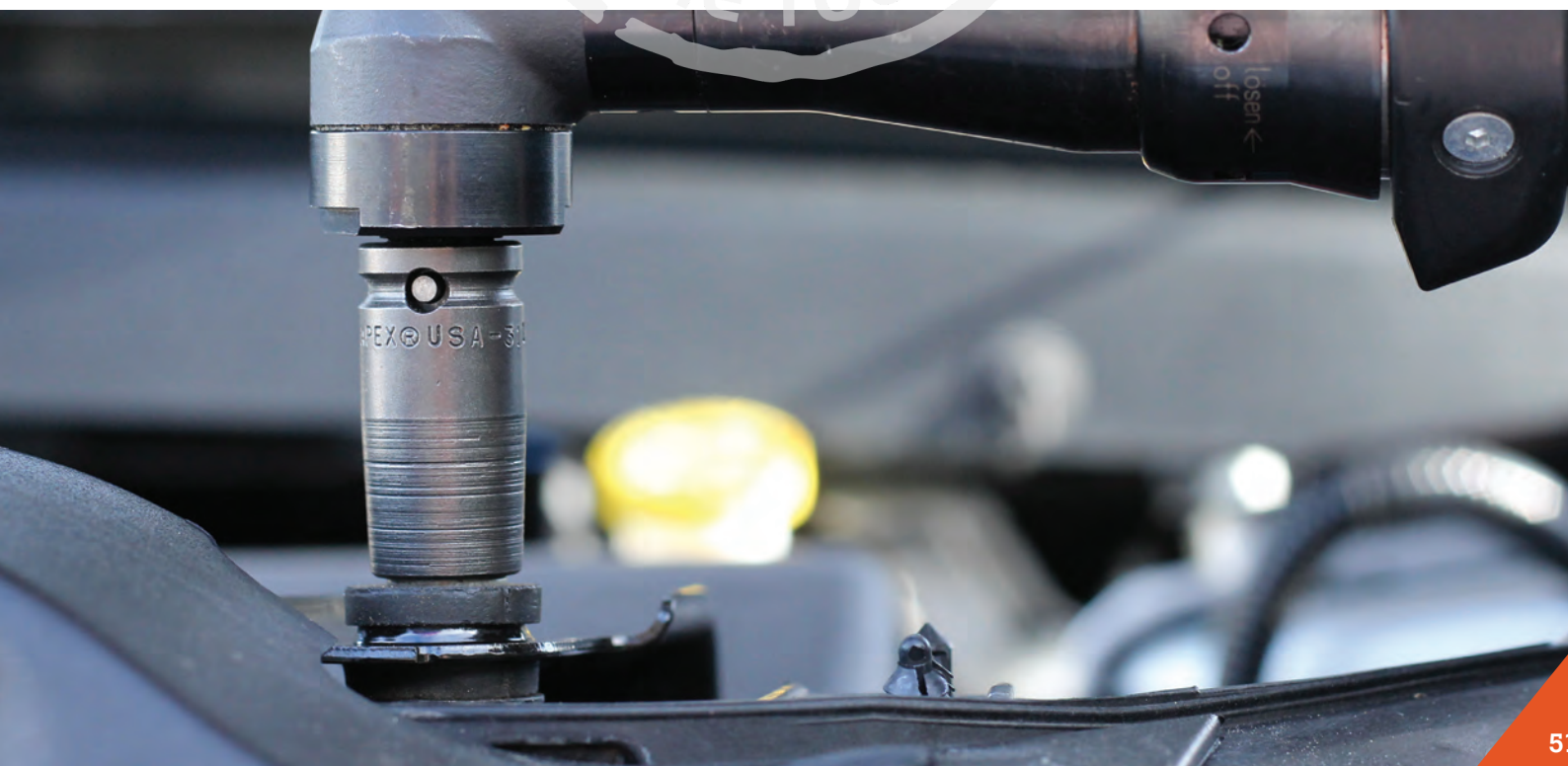
\* No DIN groove

## 6 POINT & DOUBLE HEX, THIN WALL, STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
3408	3408-D	1/4	11/4	7/16	3/4	5/32
3409	-	9/32	11/4	7/16	3/4	3/16
3410	3410-D	5/16	11/4	1/2	3/4	3/16
08-3410*	-	5/16	11/4	7/16	19/32	3/16
3412	3412-D	3/8	11/2	19/32	3/4	1/4
3414	3414-D	7/16	11/2	5/8	3/4	9/32
3416	3416-D	1/2	11/2	3/4	3/4	11/32
3418	3418-D	9/16	11/2	25/32	13/16	7/16
3420	3420-D	5/8	11/2	7/8	7/8	7/16
3424	3424-D	3/4	11/2	1	1	15/32
3426	-	13/16	11/2	11/8	11/8	17/32
3428	-	7/8	11/2	13/16	11/4	9/16
3430	3430-D	15/16	11/2	15/16	15/16	5/8
3432	-	1	11/2	13/8	13/8	5/8
3434	-	11/16	11/2	11/2	11/2	11/16

\* No DIN groove



# 3/8" SQUARE DRIVE SOCKETS, SAE

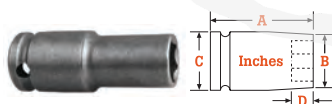
## 6 POINT & DOUBLE HEX, LONG AND EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
3208	3208-D	1/4	2	7/16	3/4	5/32
3308	-	1/4	3 1/2	7/16	3/4	5/32
3209	-	9/32	2	7/16	3/4	3/16
3210	3210-D	5/16	2	1/2	3/4	3/16
3310	3310-D	5/16	3 1/2	1/2	3/4	3/16
-	OS-3310-D*	5/16	3 1/2	15/32	5/8	3/16
3211	3211-D	11/32	2	1/2	3/4	3/16
3212	3212-D	3/8	2	19/32	3/4	1/4
3312	3312-D	3/8	3 1/2	19/32	3/4	1/4
3214	3214-D	7/16	2	11/16	3/4	9/32
3314	3314-D	7/16	3 1/2	11/16	3/4	9/32
3216	3216-D	1/2	2	13/16	13/16	11/32
3316	3316-D	1/2	3 1/2	13/16	13/16	11/32
3218	3218-D	9/16	2	7/8	7/8	7/16
3318	3318-D	9/16	3 1/2	7/8	7/8	7/16
3220	3220-D	5/8	2	15/16	15/16	7/16
3320	3320-D	5/8	3 1/2	15/16	15/16	7/16
3222	3222-D	11/16	2	1	1	7/16
3322	3322-D	11/16	3 1/2	1	1	7/16
3224	3224-D	3/4	2	11/16	1 1/16	15/32
3324	3324-D	3/4	3 1/2	11/16	11/16	15/32
3226	3226-D	13/16	2	1 1/4	1 1/4	17/32
3326	3326-D	13/16	3 1/2	1 1/4	1 1/4	17/32
3228	3228-D	7/8	2	1 1/4	1 1/4	9/16
3328	-	7/8	3 1/2	1 1/4	1 1/4	9/16

\* No DIN groove

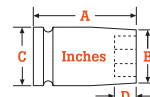
## 6 POINT & DOUBLE HEX, THIN WALL, LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
3510	-	5/16	2	1/2	3/4	3/16
-	HC-5310-D*	5/16	2	1/2	5/8	3/16
3511	-	11/32	2	1/2	3/4	3/16
3512	3512-D	3/8	2	19/32	3/4	1/4
3514	3514-D	7/16	2	5/8	3/4	9/32
3516	3516-D	1/2	2	3/4	3/4	11/32
3518	3518-D	9/16	2	25/32	13/16	7/16
3524	3524-D	3/4	2	1	1	15/32
3530	-	15/16	2	1 5/16	1 5/16	5/8
3532	-	1	2	1 3/8	1 3/8	5/8
3534	-	1 1/16	2	1 1/2	1 1/2	11/16

\* No DIN groove

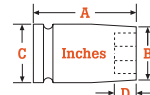
## MAGNETIC, SHORT AND STANDARD LENGTH



Part No. Fixed Magnet	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
M-3108	1/4	1 1/4	7/16	3/4	5/32
M-3109	9/32	1 1/4	7/16	3/4	3/16
M-3110	5/16	1 1/4	1/2	3/4	3/16
M-3012	3/8	7/8	19/32	3/4	3/16
M-3112	3/8	1 1/4	19/32	3/4	1/4
M-3014	7/16	7/8	11/16	3/4	9/32
M-3114	7/16	1 1/2	11/16	3/4	9/32
MSW-604	7/16	1 1/2	21/32	3/4	9/32
M-3016	1/2	7/8	13/16	13/16	5/16
M-3116	1/2	1 1/2	13/16	13/16	11/32
MHC-3816*	1/2	1 1/2	11/16	11/16	11/32
M-3018	9/16	7/8	7/8	7/8	5/16
M-3118	9/16	1 1/2	7/8	7/8	7/16
MSW-343	9/16	1 1/2	3/4	3/4	7/16
M-3120	5/8	1 1/2	15/16	15/16	7/16

\* No DIN groove

## MAGNETIC, THIN WALL, STANDARD LENGTH



Part No. Fixed Magnet	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
M-3408	1/4	1 1/4	7/16	3/4	5/32
M-3410	5/16	1 1/4	1/2	3/4	3/16
OSM-3410*	5/16	1 1/4	7/16	19/32	3/16
M-3411	11/32	1 1/4	1/2	3/4	3/16
M-3412	3/8	1 1/2	19/32	3/4	1/4
M-3414	7/16	1 1/2	5/8	3/4	9/32
OSM-3414*	7/16	1 1/2	5/8	5/8	9/32
M-3416	1/2	1 1/2	3/4	3/4	11/32
M-3418	9/16	1 1/2	25/32	13/16	7/16
M-3424	3/4	1 1/2	1	1	15/32
M-3426	13/16	1 1/2	1 1/8	1 1/8	17/32

\* No DIN groove

# 3/8" SQUARE DRIVE SOCKETS, SAE

## MAGNETIC, LONG LENGTH & EXTRA LONG LENGTH



Part No. Fixed Magnet	Part No. Mag Bolt Clearance	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	MB-3210	5/16	2	1/2	3/4	3/16
M-3212	MB-3212	3/8	2	19/32	3/4	1/4
M-3214	MB-3214	7/16	2	11/16	3/4	9/32
-	MB-3314	7/16	3 1/2	11/16	3/4	9/32
M-3216	MB-3216	1/2	2	13/16	13/16	11/32
M-3218	MB-3218	9/16	2	7/8	7/8	7/16
-	MB-3318	9/16	3 1/2	7/8	7/8	7/16
-	MB-3220	5/8	2	15/16	15/16	7/16

## MAGNETIC, THIN WALL, LONG LENGTH



Part No. Fixed Magnet	Part No. Mag Bolt Clearance	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	MB-3512	3/8	2	19/32	3/4	1/4
M-3514	MB-3514	7/16	2	5/8	3/4	9/32
-	MB-3516	1/2	2	3/4	3/4	11/32

## SURFACE DRIVE & FAST LEAD, SHORT AND STANDARD LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-3010	-	5/16	7/8	1/2	3/4	3/16
SF-3110	FL-3110	5/16	11/4	1/2	3/4	3/16
SF-3012	FL-3012	3/8	7/8	19/32	3/4	3/16
SF-3112	FL-3112	3/8	11/4	19/32	3/4	1/4
SF-3014	FL-3014	7/16	7/8	11/16	3/4	9/32
SF-3114	FL-3114	7/16	11/2	11/16	3/4	9/32
SF-3016	FL-3016	1/2	7/8	13/16	13/16	5/16
SF-3116	FL-3116	1/2	11/2	13/16	13/16	11/32
SF-3018	FL-3018	9/16	7/8	7/8	7/8	5/16
SF-3118	FL-3118	9/16	11/2	7/8	7/8	7/16
SF-3120	FL-3120	5/8	11/2	15/16	15/16	7/16
-	FL-3022	11/16	1	15/16	15/16	7/16
-	FL-3122	11/16	11/2	1	1	7/16
-	FL-3024	3/4	1	11/16	11/16	7/16
-	FL-3124	3/4	11/2	11/16	11/16	15/32

## SURFACE DRIVE & FAST LEAD, THIN WALL, STANDARD LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-3412	FL-3412	3/8	11/2	19/32	3/4	1/4
SF-3414	FL-3414	7/16	11/2	5/8	3/4	9/32
SF-3416	-	1/2	11/2	3/4	3/4	11/32
SF-HC-3816	-	1/2	11/2	11/16	11/16	11/32
SF-3418	-	9/16	11/2	25/32	13/16	7/16
SF-3432	-	1	11/2	13/8	13/8	5/8

## SURFACE DRIVE & FAST LEAD, LONG AND EXTRA LONG LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	FL-3210	5/16	2	1/2	3/4	3/16
SF-3212	FL-3212	3/8	2	19/32	3/4	1/4
-	FL-3312	3/8	3 1/2	19/32	3/4	1/4
SF-3214	FL-3214	7/16	2	11/16	3/4	9/32
SF-3314	FL-3314	7/16	3 1/2	11/16	3/4	9/32
SF-3216	FL-3216	1/2	2	13/16	13/16	11/32
SF-3316	FL-3316	1/2	3 1/2	13/16	13/16	11/32
SF-3218	FL-3218	9/16	2	7/8	7/8	7/16
SF-3318	FL-3318	9/16	3 1/2	7/8	7/8	7/16
-	FL-3220	5/8	2	15/16	15/16	7/16
SF-3320	FL-3320	5/8	3 1/2	15/16	15/16	7/16
SF-3224	-	3/4	2	11/16	11/16	15/32
SF-3324	FL-3324	3/4	3 1/2	11/16	11/16	15/32
-	FL-3326	13/16	3 1/2	11/4	11/4	17/32

## SURFACE DRIVE, THIN WALL, LONG LENGTH

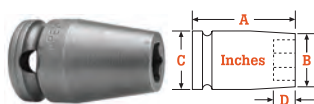


Part No. Surface Drive	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-3512	3/8	2	19/32	3/4	1/4
OSSF-3512*	3/8	2	19/32	19/32	1/4
SF-3514	7/16	2	5/8	3/4	9/32
OSSF-3514*	7/16	2	5/8	5/8	9/32
SF-3516	1/2	2	3/4	3/4	11/32
SF-3518	9/16	2	25/32	13/16	7/16

\* No ring groove

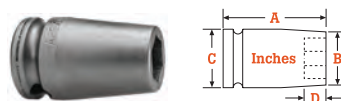
# 3/8" SQ. DR. SOCKETS FOR SAE SHEET METAL SCREWS

## 6 POINT & 6 POINT MAGNETIC, FOR PREDRILLED HOLES



Part No. Non Magnetic	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	M3E08	1/4	1 1/4	7/16	3/4	5/32
3E10	M3E10	5/16	1 1/4	1/2	3/4	3/16
3E11	-	11/32	1 1/4	1/2	3/4	3/16
3E12	M3E12	3/8	1 1/4	19/32	3/4	1/4
3E14	M3E14	7/16	1 1/4	11/16	3/4	9/32
3E16	M3E16	1/2	1 1/2	13/16	13/16	11/32
-	M3E18	9/16	1 1/2	7/8	7/8	7/16

## 6 POINT & 6 POINT MAGNETIC, FOR SELF-TAPPING SCREWS\*

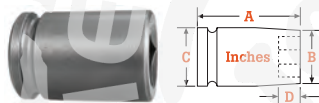


Part No. Non Magnetic	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	M3P06	3/16	1 1/4	5/16	3/4	3/32
-	M3P07	7/32	1 1/4	3/8	3/4	5/32
-	M3P08	1/4	1 1/4	7/16	3/4	5/32
3P10	M3P10	5/16	1 1/4	1/2	3/4	3/16
3P12	M3P12	3/8	1 1/4	5/8	3/4	1/4
3P14	M3P14	7/16	1 1/4	11/16	3/4	9/32
3P16	M3P16	1/2	1 1/2	13/16	13/16	11/32
-	M3P18	9/16	1 1/2	7/8	7/8	7/16

\*Sockets for self-tapping screws are maximum hardness.

## 3/8" SQ. DR. SOCKETS FOR SAE SQUARE NUTS

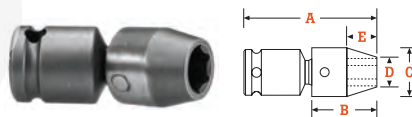
### SINGLE SQUARE & DOUBLE SQUARE



Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
3607	-	7/32	1 1/2	7/16	3/4	3/16
3608	-	1/4	1 1/2	1/2	3/4	3/16
3609	3609-D	9/32	1 1/2	9/16	3/4	3/16
3610	3610-D	5/16	1 1/2	5/8	3/4	1/4
3612	3612-D	3/8	1 1/2	3/4	3/4	1/4
3614	3614-D	7/16	1 1/2	7/8	7/8	9/32
3616	3616-D	1/2	1 1/2	1	1	11/32
3618	3618-D	9/16	1 1/2	1	1	7/16
3620	-	5/8	1 1/2	1 1/8	1 1/8	7/16
3624	-	3/4	1 1/2	1 3/8	1 3/8	15/32

## 3/8" SQ. DR. UNIV. WRENCHES, SAE

### 6 POINT & DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
SA-120	SA-120-D	5/16	1 53/64	3/4	3/4	7/16	5/16
SA-122	SA-122-D	3/8	1 57/64	13/16	3/4	9/16	3/8
SA-200	-	3/8	1 15/16	7/8	7/8	9/16	11/32
SA-123	SA-123-D	7/16	2 1/64	15/16	3/4	19/32	1/2
SA-201	-	7/16	2	15/16	7/8	5/8	13/32
SA-124	SA-124-D	1/2	2 5/64	1	3/4	3/4	9/16
SA-202	SA-202-D	1/2	2 1/16	1	7/8	11/16	15/32
SA-125	SA-125-D	9/16	2 1/8	1	13/16	13/16	9/16
SA-203	SA-203-D	9/16	2 1/16	1 1/16	7/8	3/4	17/32
SA-302	-	9/16	2 1/8	1 1/8	1	3/4	9/16
SA-205	SA-205-D	5/8	2 1/8	1 1/8	7/8	7/8	19/32
SA-305	-	1 1/16	2 5/16	1 1/4	1	1	11/16
SA-306	-	3/4	2 5/16	1 1/4	1 1/8	1 1/8	11/16

## 3/8" SQ. DR. SOCKET SETS, SAE

### 6 POINT

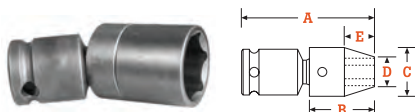


APS38	8 piece, standard length: 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4
APS38L	8 piece, long length: 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4



## 3/8" SQ. DR. IRONBAND™ UNIV. WRENCHES, SAE

### 6 POINT



Part Number	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
SA-C-120	5/16	1.83	.75	.75	.44	.31
SA-C-122	3/8	1.89	.81	.75	.56	.38
SA-C-123	7/16	2.02	.94	.75	.59	.50
SA-C-124	1/2	2.08	1.0	.75	.75	.56
SA-C-205	5/8	2.13	1.13	.88	.88	.59
SA-C-305	11/16	2.31	1.25	1.00	1.00	.69
SA-C-306	3/4	2.31	1.25	1.13	1.13	.69

## 3/8" SQ. DR. UNIVERSAL WRENCH SET, SAE

### 6 POINT



APU37 7 piece, standard length: 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4



#### APEX UNIVERSAL WRENCHES & SOCKETS:

APEX Universal Wrenches and Sockets meet the Minimum Proof Torque requirements specified in ASME impact standards B107.2, B107.33M and B107.110. Maximum operating angle is 30 degrees for Universal Wrenches.

## 3/8" SQUARE DRIVE UNIV. WRENCHES, SAE – EXTENSION

### 6 POINT STANDARD & TENSION TYPE



Part No. Standard	Part No. Tension	Hex Open IN.	Shank Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
KA-43-6	KD-43-6	3/8	6	13/16	5/8	17/32	7/16
KA-44-3	–	7/16	3	7/8	5/8	5/8	1/2
KA-44-4	–	7/16	4	7/8	5/8	5/8	1/2
KA-44-6	KD-44-6	7/16	6	7/8	5/8	5/8	1/2
KA-103-6	KD-103-6	7/16	6	15/16	3/4	19/32	1/2
KA-45-3	–	1/2	3	7/8	5/8	11/16	1/2
KA-45-4	–	1/2	4	7/8	5/8	11/16	1/2
KA-45-6	KD-45-6	1/2	6	7/8	5/8	11/16	1/2
KA-45-9	–	1/2	9	7/8	5/8	11/16	1/2
KA-104-9	–	1/2	9	1	3/4	3/4	9/16
–	KD-104-12	1/2	12	1	3/4	3/4	9/16
KA-105-3	KD-105-3	9/16	3	1	3/4	13/16	9/16
KA-105-4	–	9/16	4	1	3/4	13/16	9/16
KA-105-6	KD-105-6	9/16	6	1	3/4	13/16	9/16
KA-105-9	–	9/16	9	1	3/4	13/16	9/16
KA-205-3	–	5/8	3	11/8	7/8	7/8	19/32
–	KD-205-6	5/8	6	11/8	7/8	7/8	19/32

## 3/8" SQ. DR. IRONBAND™ UNIV. WRENCHES, SAE-EXT.

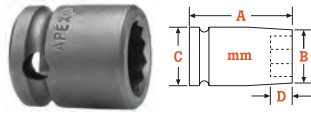
### 6 POINT STANDARD & TENSION TYPE



Part No. Standard	Part No. Tension	Hex Open IN.	Shank Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
KAW-C-43-6	KDW-C-43-6	3/8	6	13/16	5/8	17/32	7/16
KAW-C-44-6	KDW-C-44-6	7/16	6	7/8	5/8	5/8	1/2
KAW-C-45-6	KDW-C-45-6	1/2	6	7/8	5/8	11/16	1/2
–	KDW-C-104-3	1/2	3	1	3/4	3/4	9/16
KAW-C-104-9	–	1/2	9	1	3/4	3/4	9/16
–	KDW-C-104-12	1/2	12	1	3/4	3/4	9/16
KAW-C-105-6	KDW-C-105-6	9/16	6	1	3/4	13/16	9/16

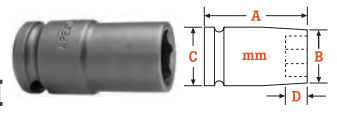
# 3/8" SQUARE DRIVE SOCKETS, METRIC

## 6 POINT & DOUBLE HEX, SHORT AND STANDARD LENGTH



Part No. 6 Pt.	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
6MM13	-	6	31.7	11.1	19.1	3.9
7MM03	-	7	22.2	11.1	19.1	3.0
7MM13	-	7	31.7	11.1	19.1	4.8
8MM03	-	8	22.2	12.7	19.1	4.8
8MM13	8MM13-D	8	31.7	12.7	19.1	4.8
9MM13	9MM13-D	9	31.7	15.1	19.1	4.8
10MM03	10MM03-D	10	22.2	16.8	19.1	6.4
10MM13	10MM13-D	10	31.7	16.8	19.1	6.4
11MM03	11MM03-D	11	22.2	17.5	19.1	7.2
11MM13	11MM13-D	11	31.7	17.5	19.1	7.2
12MM03	12MM03-D	12	22.2	19.1	19.1	7.2
12MM13	12MM13-D	12	38.1	19.1	19.1	7.2
13MM03	13MM03-D	13	22.2	20.6	20.6	7.9
13MM13	13MM13-D	13	38.1	20.6	20.6	8.7
14MM03	14MM03-D	14	22.2	22.2	22.2	7.9
14MM13	14MM13-D	14	38.1	22.2	22.2	11.1
15MM03	15MM03-D	15	23.8	22.2	22.2	9.5
15MM13	15MM13-D	15	38.1	22.2	22.2	11.1
16MM03	16MM03-D	16	25.4	23.8	23.8	11.1
16MM13	16MM13-D	16	38.1	23.8	23.8	11.1
17MM03	-	17	25.4	25.4	25.4	11.1
17MM13	17MM13-D	17	38.1	25.4	25.4	11.1
18MM03	-	18	25.4	25.4	25.4	11.1
18MM13	18MM13-D	18	38.1	25.4	25.4	11.1
19MM03	19MM03-D	19	25.4	28.6	28.6	11.1
19MM13	19MM13-D	19	38.1	28.6	28.6	11.9
20MM03	-	20	25.4	28.6	28.6	11.1
21MM03	-	21	25.4	31.7	31.7	11.1
21MM13	-	21	38.1	31.7	31.7	13.5
22MM03	-	22	25.4	31.7	31.7	11.1
22MM13	-	22	38.1	31.7	31.7	14.3

## 6 POINT & DOUBLE HEX, THIN WALL, STANDARD LENGTH



Part No. 6 Pt.	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
6MM43	-	6	31.7	9.5	19.1	3.9
7MM43	7MM43-D	7	31.7	11.1	19.1	4.8
OS-8MM13	-	8	31.7	11.7	15.7	4.8
8MM43	8MM43-D	8	31.7	12.7	19.1	4.8
9MM43	9MM43-D	9	31.7	12.7	19.1	4.8
10MM43	10MM43-D	10	31.7	15.1	19.1	6.4
-	VC-487-10MM-D	10	31.7	14.6	14.6	7.1
-	OS-10MM43-D	10	31.7	15	15	7.1
11MM43	-	11	38.1	15.9	19.1	7.2
12MM43	12MM43-D	12	38.1	17.5	19.1	7.2
13MM43	13MM43-D	13	38.1	19.1	19.1	8.7
14MM43	14MM43-D	14	38.1	19.8	20.6	11.1
15MM43	15MM43-D	15	38.1	20.6	20.6	11.1
16MM43	16MM43-D	16	38.1	22.2	22.2	11.1
17MM43	17MM43-D	17	38.1	23.8	23.8	11.1
18MM43	-	18	38.1	23.8	23.8	11.1
19MM43	19MM43-D	19	38.1	25.4	25.4	11.9

## 6 POINT & DOUBLE HEX, LONG & EXTRA LONG LENGTH

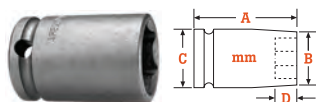


Part No. 6 Pt.	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
7MM23	-	7	50.8	11.1	19.1	4.8
8MM23	8MM23-D	8	50.8	12.7	19.1	4.8
9MM23	9MM23-D	9	50.8	15.1	19.1	4.8
10MM23	10MM23-D	10	50.8	16.8	19.1	6.4
OS-10MM23*	OS-10MM23-D*	10	50.8	14.2	15.9	6.4
10MM33	-	10	88.9	16.8	19.1	6.4
11MM23	11MM23-D	11	50.8	17.5	19.1	7.2
12MM23	12MM23-D	12	50.8	19.1	19.1	7.2
12MM33	-	12	88.9	19.1	19.1	7.1
13MM23	13MM23-D	13	50.8	20.6	20.6	8.7
13MM33	-	13	88.9	20.6	20.6	8.7
14MM23	14MM23-D	14	50.8	22.2	22.2	11.1
14MM33	-	14	88.9	22.1	22.1	11.1
15MM23	15MM23-D	15	50.8	22.2	22.2	11.1
15MM33	15MM33-D	15	88.9	22.2	22.2	11.1
16MM23	16MM23-D	16	50.8	23.8	23.8	11.1
17MM23	17MM23-D	17	50.8	25.4	25.4	11.1
18MM23	18MM23-D	18	50.8	25.4	25.4	11.1
19MM23	19MM23-D	19	50.8	28.6	28.6	11.9
21MM23	-	21	50.8	31.7	31.7	13.5
22MM23	-	22	50.8	31.7	31.7	14.3

\* No DIN groove

# 3/8" SQUARE DRIVE SOCKETS, METRIC

## MAGNETIC, SHORT & STANDARD LENGTH



Part No. Fixed Magnet	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-6MM13	-	6	31.8	11.1	19.1	3.9
M-7MM13	-	7	31.8	11.1	19.1	4.8
M-8MM13	-	8	31.8	12.7	19.1	4.8
M-9MM13	-	9	31.8	15.1	19.1	4.8
M-10MM03	-	10	22.2	16.8	19.1	6.4
M-10MM13	-	10	31.8	16.8	19.1	6.4
-	M-10MM13-D	10	31.8	16.8	19.1	3.8
OSM-10MM13	-	10	31.7	14.2	19.1	7.1
-	MVC-487-10MM-D	10	31.8	14.7	14.7	4.4
M-11MM03	-	11	22.2	17.5	19.1	7.2
M-11MM13	-	11	31.7	17.5	19.1	7.2
M-12MM03	-	12	22.2	19.1	19.1	7.2
M-12MM13	-	12	38.1	19.1	19.1	7.2
-	M-12MM13-D	12	38.1	19.1	19.1	5.1
M-13MM03	-	13	22.2	20.6	20.6	8.7
M-13MM13	-	13	38.1	20.6	20.6	8.7
MVC-693-13MM	-	13	50.8	19.1	19.1	5.9
M-14MM03	-	14	22.2	22.2	22.2	4.8
M-14MM13	-	14	38.1	22.2	22.2	11.1
M-15MM03	-	15	23.8	22.2	22.2	9.5
M-15MM13	-	15	38.1	22.2	22.2	11.1
M-16MM13	-	16	38.1	23.8	23.8	11.1
M-17MM13	-	17	38.1	25.4	25.4	11.1
M-18MM03	-	18	25.4	25.4	25.4	11.1
M-18MM13	-	18	38.1	25.4	25.4	11.1

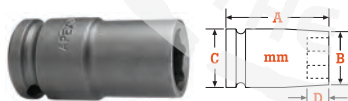
## MAGNETIC, LONG & EXTRA LONG LENGTH



Part Number Magnetic	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
MB-6MM23	-	6	50.8	11.1	19.1	3.9
MB-7MM23	-	7	50.8	11.1	19.1	4.8
M-8MM23	-	8	50.8	12.7	19.1	4.8
MB-8MM23	-	8	50.8	12.7	19.1	4.8
OSMB-8MM23*	-	8	50.8	11.7	15.9	4.8
MB-9MM23	-	9	50.8	15.1	19.1	4.8
MB-10MM23	MB-10MM23-D	10	50.8	16.8	19.1	6.4
OSMB-10MM23*	OSMB-10MM23-D	10	50.8	14.2	15.9	6.4
MB-10MM33	-	10	88.9	16.8	19.1	6.4
MB-11MM23	-	11	50.8	17.5	19.1	7.2
MB-11MM33	-	11	88.9	17.5	19.1	8.0
MB-12MM23	MB-12MM23-D	12	50.8	19.1	19.1	7.2
MB-12MM33	-	12	88.9	19.1	19.1	8.0
M-13MM23	-	13	50.8	20.6	20.6	5.1
MB-13MM23	MB-13MM23-D	13	50.8	20.6	20.6	8.7
MB-13MM33	-	13	88.9	20.6	20.6	8.7
MB-14MM23	MB-14MM23-D	14	50.8	22.2	22.2	11.1
MB-14MM33	-	14	88.9	22.2	22.2	9.5
MB-15MM23	-	15	50.8	22.2	22.2	11.1
MB-15MM33	-	15	88.9	22.2	22.2	11.1
MB-16MM23	-	16	50.8	23.8	23.8	11.1
MB-17MM23	-	17	50.8	25.4	25.4	11.1
MB-18MM23	-	18	50.8	25.4	25.4	11.1

\* No DIN groove

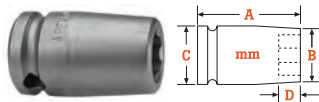
## MAGNETIC, THIN WALL, STANDARD LENGTH



Part No. Fixed Magnetic	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-8MM43	-	8	31.7	12.7	19.1	4.8
M-10MM23	-	10	50.8	16.8	19.1	3.9
M-10MM43	-	10	31.7	15.1	19.1	6.4
-	OSM-10MM43-D	10	31.7	15	15	7.1
M-11MM43	-	11	38.1	15.9	19.1	7.2
M-12MM43	-	12	38.1	17.5	19.1	7.2
-	M-12MM43-D	12	38.1	17.5	19.1	7.9
M-13MM43	-	13	38.1	19.1	19.1	8.7
M-14MM43	-	14	38.1	19.8	20.6	11.1
M-15MM43	-	15	38.1	20.5	20.6	11.1

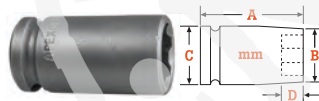
# 3/8" SQUARE DRIVE SOCKETS, METRIC

## SURFACE DRIVE, SHORT AND STANDARD LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-8MM13	8	31.7	12.7	19.1	4.8
SF-10MM03	10	22.2	16.8	19.1	6.4
SF-10MM13	10	31.7	16.8	19.1	6.4
MSF-10MM13	10	31.8	16.7	19.1	3.8
SF-11MM13	11	31.7	17.5	19.1	7.2
SF-12MM03	12	22.2	19.1	19.1	7.2
SF-12MM13	12	38.1	19.1	19.1	7.2
SF-13MM03	13	22.2	20.6	20.6	8.7
SF-13MM13	13	38.1	20.6	20.6	8.7
SF-14MM13	14	38.1	22.2	22.2	11.1
SF-15MM03	15	23.8	22.2	22.2	11.1
SF-15MM13	15	38.1	22.2	22.2	11.1
SF-16MM13	16	38.1	23.8	23.8	11.1
SF-17MM03	17	25.4	25.4	25.4	11.1
SF-17MM13	17	38.1	25.4	25.4	11.1
SF-18MM13	18	38.1	25.4	25.4	11.1
SF-19MM13	18	38.1	28.6	28.6	11.9

## SURFACE DRIVE, THIN WALL, STANDARD LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-10MM43	10	31.7	15.1	19.1	6.4
OSSF-10MM43*	10	31.7	15.1	15.1	6.4
SF-11MM43	11	38.1	15.9	19.1	7.2
SF-12MM43	12	38.1	17.5	19.1	7.2
SF-13MM43	13	38.1	19.1	19.1	8.7
SF-15MM43	15	38.1	20.6	20.6	11.1
SF-17MM43	17	38.1	23.8	23.8	11.1
SF-18MM43	18	38.1	23.8	23.8	11.1
SF-19MM43	19	38.1	25.4	25.4	11.9

\* No DIN groove

## SURFACE DRIVE, LONG & EXTRA LONG LENGTH

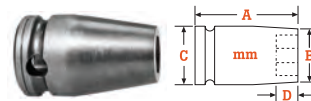


Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-8MM23	8	50.8	12.7	19.1	4.8
OSSF-8MM23*	8	50.8	11.9	15.9	4.8
SF-8MM33	8	88.9	11.9	19.1	4.7
SF-10MM23	10	50.8	16.8	19.1	6.4
OSSF-10MM23*	10	50.8	14.2	15.9	6.4
VCSF-836-10MM	10	123.7	15.0	19.1	7.1
VCSF-840-10MM	10	98.4	15.7	19.1	7.1
SF-10MM33	10	88.9	16.8	19.1	6.4
SF-11MM23	11	50.8	17.5	19.1	7.2
SF-12MM23	12	50.8	19.1	19.1	7.2
SF-13MM23	13	50.8	20.6	20.6	8.7
SF-13MM33	13	88.9	20.6	20.6	8.7
SF-15MM23	15	50.8	22.2	22.2	11.1
SF-15MM33	15	88.9	22.2	22.2	11.1
SF-17MM23	17	50.8	25.4	25.4	11.1
SF-18MM23	18	50.8	25.4	25.4	11.1
SF-19MM23	19	50.8	28.6	28.6	11.9

\* No DIN groove

## 3/8" SQ. DR. SOCKETS FOR METRIC SHEET METAL SCREWS

## 6 POINT & 6 POINT MAGNETIC, FOR PREDRILLED HOLES



Part No. 6 Pt.	Part No. Magnetic	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
-	M-6MME3	6	31.7	11.1	19.1	3.9
-	M-7MME3	7	31.7	11.9	19.1	4.8
8MME3	M-8MME3	8	31.7	12.7	19.1	4.8
10MME3	M-10MME3	10	31.7	16.8	19.1	6.4
-	M-11MME3	11	31.7	17.5	19.1	7.2
13MME3	M-13MME3	13	38.1	20.6	20.6	8.7



## 3/8" SQUARE DRIVE SOCKET SETS, METRIC

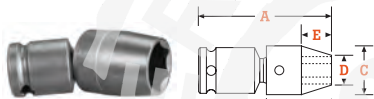
### 6 POINT



APS312M	12 piece, standard length: 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm
APS312LM	12 piece, long length: 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm

## 3/8" SQ. DR. IRONBAND™ UNIV. WRENCHES, METRIC

### 6 POINT



Part No. 6 Pt.	Hex Opening MM.	Overall Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
SA-C-36-10M	10	48	20.6	19.1	15.1	9.5
SA-C-37-12M	12	51	23.8	22.2	17.5	10.3
SA-C-37-13M	13	52	25.4	22.2	17.5	11.9
SA-C-37-14M	14	54	27.0	22.2	19.1	13.5
SA-C-38-15M	15	56	28.6	25.4	19.8	14.3
SA-C-38-17M	17	59	31.8	25.4	25.4	17.5
SA-C-38-18M	18	59	31.8	25.4	25.4	17.5

## 3/8" SQ. DR. UNIVERSAL WRENCH SET, METRIC

### 6 POINT



APU37M	7 piece, standard length: 10mm, 12mm, 13mm, 14mm, 15mm, 17mm, 18mm
--------	--

## 3/8" SQ. DR. UNIV. WRENCHES, METRIC – EX.

### 6 POINT STANDARD & TENSION TYPE



Part No. Standard	Part No. Tension	Hex Open MM.	Shank Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
KA-6-10M-4	–	10	102	20.6	19.1	15.1	9.5
KA-6-10M-6	KD-6-10M-6	10	152	20.6	19.1	15.5	9.5
KA-6-10M-9	KD-6-10M-9	10	229	23.8	19.1	15.5	9.5
–	KD-6-10M-12	10	305	20.6	19.1	15.5	9.3
–	KD-7-11M-6	11	152	23.8	22.2	15.9	10.3
KA-7-11M-12	KD-7-11M-12	11	305	23.8	22.2	15.9	10.3
KA-7-12M-4	–	12	102	23.8	22.2	17.5	10.3
KA-7-12M-6	KD-7-12M-6	12	152	23.8	22.2	17.5	10.3
KA-7-12M-9	KD-7-12M-9	12	229	25.4	22.2	17.5	10.3
KA-7-12M-12	KD-7-12M-12	12	305	23.8	22.2	17.5	10.3
KA-7-13M-3	–	13	76	25.4	22.2	17.5	11.9
KA-7-13M-4	–	13	102	25.4	22.2	17.5	11.9
KA-7-13M-6	KD-7-13M-6	13	152	25.4	22.2	17.5	11.9
KA-7-13M-9	KD-7-13M-9	13	229	27.0	22.2	17.5	11.9
KA-7-13M-12	KD-7-13M-12	13	305	25.4	22.2	17.5	11.9
KA-7-14M-6	KD-7-14M-6	14	152	27	22.2	19.1	13.5
–	KD-7-14M-9	14	152	27.0	22.2	19.1	13.5
–	KD-7-14M-12	14	229	28.6	22.2	19.1	13.5
–	–	14	305	27.0	22.2	19.1	13.5
KA-8-15M-3	–	15	76	28.6	25.4	19.8	14.3
–	KD-8-15M-6	15	152	28.6	25.4	19.8	14.3
KA-8-15M-9	KD-8-15M-9	15	229	20.6	25.4	19.8	14.3
KA-8-15M-12	KD-8-15M-12	15	305	28.6	25.4	19.8	14.3

## 3/8" SQ. DR. IRONBAND™ UNIV. WRENCHES, METRIC – EXT.

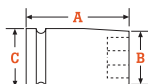
### 6 POINT STANDARD & TENSION TYPE



Part No. Standard	Part No. Tension	Hex Open MM.	OAL (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
KAW-C-6-10M-6	KDW-C-6-10M-6	10	152	20.6	19.1	15.5	9.5
KAW-C-6-10M-9	KDW-C-6-10M-9	10	229	20.6	19.1	15.5	9.5
KAW-C-7-12M-6	KDW-C-7-12M-6	12	152	23.8	22.2	17.5	10.3
KAW-C-7-12M-12	KDW-C-7-12M-12	12	305	23.8	22.2	17.5	10.3
–	KDW-C-7-13M-3	13	76	25.4	22.2	17.5	11.9
KAW-C-7-13M-6	KDW-C-7-13M-6	13	152	25.4	22.2	17.5	11.9
KAW-C-7-13M-12	KDW-C-7-13M-12	13	305	25.4	22.2	17.5	11.9
KAW-C-7-14M-6	KDW-C-7-14M-6	14	152	27.0	22.2	19.1	13.5
KAW-C-8-15M-9	KDW-C-8-15M-9	15	229	28.6	25.4	19.8	14.3

# 3/8" SQ. DR. SOCKETS FOR SPLINE FASTENERS

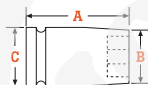
## STANDARD AND LONG LENGTH



Part No.	Spline Size	Nominal Size	Overall Length (A)	Nose End Dia. (B)	Drive End Dia. (C)
Standard	Size	IN.	IN. MM.	IN. MM.	IN. MM.
CMS-3412	12	3/8	1 25	17/32 14	21/32 17
CMS-3512	12	3/8	2 1/8 54	17/32 14	21/32 17
CMS-3414	14	7/16	1 1/16 27	5/8 16	11/16 18
CMS-3416	16	1/2	1 1/16 27	23/32 18	23/32 18
CMS-3418	18	9/16	1 1/16 27	13/16 21	13/16 21
CMS-3518	18	9/16	2 3/8 60	13/16 21	13/16 21
CMS-3420	20	5/8	1 3/16 30	7/8 22	7/8 22

# 3/8" SQ. DR. TORX® SOCKETS

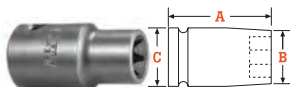
## FOR EXTERNAL TORX SCREWS



Part No.	Driver Size	Overall Length (A)	Nose End Dia. (B)	Drive End Dia. (C)
	Size	IN. MM.	IN. MM.	IN. MM.
TX-3106	E-6	1 1/4 32	3/8 10	3/4 19
TX-3107	E-7	1 1/4 32	3/8 10	3/4 19
TX-3108	E-8	1 1/4 32	7/16 11	3/4 19
TX-3110	E-10	1 1/4 32	1/2 13	3/4 19
TX-3112	E-12	1 1/4 32	5/8 16	3/4 19
MTX-3112*	E-12	1 1/4 32	5/8 16	3/4 19
TX-3114	E-14	1 1/4 32	11/16 18	3/4 19
TX-3116	E-16	1 1/4 32	13/16 21	13/16 21

\* Magnetic

## FOR EXTERNAL TORX SCREWS, THIN WALL



Part No.	Driver Size	Overall Length (A)	Nose End Dia. (B)	Drive End Dia. (C)
	Size	IN. MM.	IN. MM.	IN. MM.
TX-3406	E-6	1 1/4 32	5/16 8	5/8 16
TX-3407	E-7	1 1/4 32	11/32 9	5/8 16
TX-3408	E-8	1 1/4 32	3/8 10	5/8 16
TX-3508	E-8	2 51	3/8 10	5/8 16
TX-3410	E-10	1 1/4 32	1/2 13	5/8 16
MTX-3410*	E-10	1 1/4 32	3/8 10	5/8 16
TX-3412	E-12	1 1/4 32	9/16 14	5/8 16
MTX-3412*	E-12	1 1/4 32	9/16 14	5/8 16
TX-3414	E-14	1 1/4 32	5/8 16	3/4 19
MTX-3414*	E-14	1 1/4 32	5/8 16	3/4 19

\* Magnetic

## FOR TORX NUTS



Part No.	Driver Size	Overall Length (A)	Nose End Dia. (B)	Drive End Dia. (C)
	Size	IN. MM.	IN. MM.	IN. MM.
TX-3E08	E-8	1 1/4 32	5/8 16	5/8 16
TX-3E10	E-10	1 1/4 32	5/8 16	5/8 16

# 3/8" SQ. DR. EXTENSIONS

## 1 1/4" TO 18" LENGTH



Part No.	Male Square IN.	Type of Lock	Overall Length
			IN. MM.
EX-374	3/8	Pin	13/8 34
EX-374-B	3/8	Ball	13/8 34
EX-376-2	3/8	Pin	2 21
EX-376-B-2	3/8	Ball	2 51
EX-376-3	3/8	Pin	3 76
EX-376-B-3	3/8	Ball	3 76
EX-376-4	3/8	Pin	4 102
EX-376-B-4	3/8	Ball	4 102
EX-376-5	3/8	Pin	5 127
EX-376-B-5	3/8	Ball	5 127
EX-376-6	3/8	Pin	6 152
EX-376-B-6	3/8	Ball	6 152
EX-376-8	3/8	Pin	8 203
EX-376-B-8	3/8	Ball	8 203
EX-376-9	3/8	Pin	9 229
EX-376-B-9	3/8	Ball	9 229
EX-376-10	3/8	Pin	10 254
EX-376-B-10	3/8	Ball	10 254
EX-376-12	3/8	Pin	12 305
EX-376-B-12	3/8	Ball	11 305
EX-376-15	3/8	Pin	15 381
EX-376-B-15	3/8	Ball	15 381
EX-376-18	3/8	Pin	18 457

## 3/8" SQ. DR. ADAPTERS

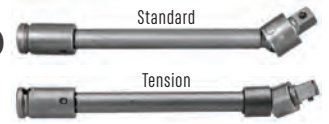
### 1/4" TO 3/4" MALE SQUARE



Part No.	Female Square IN.	Male Square IN.	Type of Lock	Overall Length	
				IN.	MM.
EX-254	3/8	1/4	Pin	1 1/4	32
EX-254-B	3/8	1/4	Ball	1 1/4	32
EX-257-2	3/8	1/4	Pin	2	51
EX-257-B-2	3/8	1/4	Ball	2	51
EX-257-3	3/8	1/4	Pin	3	76
EX-257-B-3	3/8	1/4	Ball	3	76
EX-257-4	3/8	1/4	Pin	4	102
EX-257-B-4	3/8	1/4	Ball	4	102
EX-257-5	3/8	1/4	Pin	5	127
EX-257-B-5	3/8	1/4	Ball	5	127
EX-257-6	3/8	1/4	Pin	6	152
EX-257-B-6	3/8	1/4	Ball	6	152
EX-257-8	3/8	1/4	Pin	8	203
EX-257-11	3/8	1/4	Pin	11	279
EX-503	3/8	1/2	Pin	1 1/2	38
EX-503-B	3/8	1/2	Ball	1 1/2	38
EX-507-2	3/8	1/2	Pin	2	51
EX-507-3	3/8	1/2	Pin	3	76
EX-507-B-3	3/8	1/2	Ball	3	76
EX-507-4	3/8	1/2	Pin	4	102
EX-507-B-4	3/8	1/2	Ball	4	102
EX-507-6	3/8	1/2	Pin	6	152
EX-507-B-6	3/8	1/2	Ball	6	152
EX-622	3/8	5/8	Pin	1 1/2	38
EX-750	3/8	3/4	7/32 Drill Hole	1 1/2	38
EX-750-B	3/8	3/4	Ball	1 1/2	38

## 3/8" SQ. DR. UNIVERSAL ADAPTERS – EXT.

### FEMALE SQUARE TO MALE SQUARE



Part No. Standard	Part No. Tension	Female Square IN.	Male Square IN.	Type of Lock	Largest Dia.	
					IN.	MM.
KAM-37-3	KDM-37-3	3/8	3/8	Pin	3/4	19
–	KDM-37-B-3	3/8	3/8	Ball	3/4	19
KAM-37-12	KDM-37-12	3/8	3/8	Pin	3/4	19
–	KDM-37-6	3/8	3/8	Pin	3/4	19
–	KDM-37-9	3/8	3/8	Pin	3/4	19
–	KDM-38-3	3/8	3/8	Pin	7/8	22
KAM-38-6	KDM-38-6	3/8	3/8	Pin	7/8	22
–	KDM-38-9	3/8	3/8	Pin	7/8	22
–	KDM-38-12	3/8	3/8	Pin	7/8	22

## 3/8" SQ. DR. UNIV. ADAPTERS

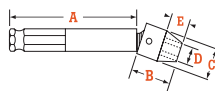
### FEMALE SQUARE TO MALE SQUARE



Part No.	Female Square IN.	Male Square IN.	Type of Lock	Overall Length		Largest Dia.	
				IN.	MM.	IN.	MM.
MF-27	3/8	1/4	Pin	1 5/16	49	3/4	19
MF-27-B	3/8	1/4	Ball	1 5/16	49	3/4	19
MF-37	3/8	3/8	Pin	2 1/8	54	3/4	19
MF-37-B	3/8	3/8	Ball	2 1/8	54	3/4	19
MF-38-B	3/8	3/8	Ball	2 1/2	64	7/8	22

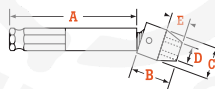
# 7/16" MALE HEX UNIVERSAL WRENCHES

## SAE 6 POINT, STANDARD & TENSION TYPE – EXTENSION



Part Number	Part No. Tension	Hex Opening IN.	Shank Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
KB-43-6	–	3/8	6	13/16	5/8	7/32	7/16
–	KT-44-6	7/16	6	7/8	5/8	5/8	1/2
KB-45-3	–	1/2	3	7/8	11/16	11/16	1/2
KB-45-4	– KT-	1/2	4	7/8	11/16	11/16	1/2
KB-104-6	104-6	1/2	6	1	3/4	3/4	9/16
KB-202-6	KT-202-6	1/2	6	1	7/8	11/16	15/32
–	KT-202-9	1/2	9	1	7/8	11/16	15/32
KB-202-12	KT-202-12	1/2	12	1	7/8	11/16	15/32
KB-317-9	KT-317-9	1/2	9	1	1	11/16	7/16
KB-105-3	–	9/16	3	1	13/16	13/16	9/16
–	KT-105-6	9/16	6	1	13/16	13/16	9/16
–	KT-105-9	9/16	9	1	13/16	13/16	9/16
–	KT-105-12	9/16	12	1	13/16	13/16	9/16
–	KT-203-6	9/16	6	11/16	7/8	3/4	17/32
KB-203-9	KT-203-9	9/16	9	11/16	7/8	3/4	17/32
KB-203-12	KT-203-12	9/16	12	11/16	7/8	3/4	17/32
–	KT-318-6	9/16	6	11/8	1	3/4	9/16
KB-318-12	–	9/16	12	11/8	1	3/4	9/16
KB-205-6	KT-205-6	5/8	6	11/8	7/8	7/8	19/32
KB-205-12	KT-205-12	5/8	12	11/8	7/8	7/8	19/32
KB-320-6	KT-320-6	5/8	6	13/16	1	27/32	5/8
–	KT-320-9	5/8	9	13/16	1	27/32	5/8
–	KT-320-12	5/8	12	13/16	1	27/32	5/8
KB-321-6	–	11/16	6	11/4	1	1	11/16
KB-322-3	–	3/4	3	11/4	11/8	1-1/8	11/16
KB-322-6	KT-322-6	3/4	6	11/4	11/8	1-1/8	11/16
–	KT-322-9	3/4	9	11/4	11/8	1-1/8	11/16

## METRIC 6 POINT, STANDARD & TENSION TYPE – EXTENSION

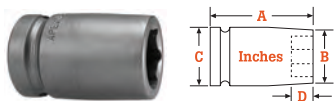


Part Number	Part No. Tension	Hex Opening MM.	Shank Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
KB-6-10M-6	KT-6-10M-6	10	152	20.6	19.1	15.1	9.5
–	KT-6-10M-9	10	152	20.6	19.1	15.1	9.5
–	KT-6-10M-12	10	305	20.6	19.1	15.1	9.5
KB-7-11M-6	–	11	152	23.8	22.2	15.9	10.3
KB-7-13M-3	–	13	76	25.4	22.2	17.5	11.9
KB-7-13M-6	KT-7-13MM-6	13	152	25.4	22.2	17.5	11.9
KB-7-13M-9	KT-7-13MM-9	13	229	25.4	22.2	17.5	11.9
KB-7-13M-12	–	13	305	25.4	22.2	17.5	11.9
KB-7-14M-6	KT-7-14M-6	14	152	27.0	22.2	19.1	13.5
–	KT-7-14M-12	14	305	27.0	22.2	19.1	14.3
–	KT-7-15M-6	15	152	27	22.2	19.1	14.3
KB-8-15M-6	KT-8-15M-6	15	152	28.6	25.4	19.8	14.3
KB-8-15M-9	KT-8-15M-9	15	229	28.6	25.4	19.8	14.3
KB-8-15M-12	KT-8-15M-12	15	305	28.6	25.4	19.8	14.3
KB-8-16M-6	KT-8-16M-6	16	152	30.2	25.4	21.4	15.9
KB-8-16M-9	KT-8-16M-9	16	229	30.2	25.4	21.4	15.9
–	KT-8-16M-12	16	305	30.2	25.4	21.4	15.9
–	KT-8-17M-6	17	152	31.8	25.4	25.4	17.5
KB-8-17M-12	KT-8-17M-12	17	305	31.8	25.4	25.4	17.5
KB-8-18M-6	KT-8-18M-6	18	152	31.8	25.4	25.4	17.5
–	KT-8-18M-9	18	229	31.8	25.4	25.4	17.5
–	KT-8-18M-12	18	305	21.8	25.4	25.4	17.5
KB-10-19M-6	KT-10-19M-6	19	152	34.9	31.8	26.2	16.3



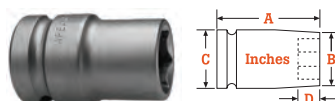
# 1/2" SQUARE DRIVE SOCKETS, SAE

## 6 POINT AND DOUBLE HEX, STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5108	-	1/4	1 1/2	7/16	15/16	5/32
5110	5110-D	5/16	1 1/2	1/2	15/16	3/16
5112	5112-D	3/8	1 1/2	5/8	15/16	1/4
5114	5114-D	7/16	1 1/2	11/16	15/16	9/32
5116	5116-D	1/2	1 1/2	13/16	15/16	11/32
SH-335	-	1/2	1 1/2	45/64	15/16	11/32
5118	5118-D	9/16	1 1/2	7/8	15/16	7/16
SH-336	SH-336-D	9/16	1 1/2	27/32	15/16	7/16
5119	-	19/32	1 1/2	15/16	15/16	7/16
5120	5120-D	5/8	1 1/2	1	1	7/16
SH-338	SH-338-D	5/8	1 1/2	15/16	1	7/16
5122	5122-D	11/16	1 1/2	1 1/8	1 1/8	7/16
SH-339	-	11/16	1 1/2	11/64	11/16	7/16
SW-282	SW-282-D	3/4	1 1/2	1 1/4	1 1/4	15/32
5124	5124-D	3/4	1 1/2	1 1/8	1 1/8	15/32
5126	5126-D	13/16	1 1/2	1 1/4	1 1/4	17/32
5128	5128-D	7/8	1 1/2	15/16	15/16	9/16
5130	5130-D	15/16	1 1/2	13/8	13/8	5/8
5131	-	31/32	1 1/2	11/2	11/2	5/8
5132	5132-D	1	1 1/2	1 1/2	1 1/2	5/8
5134	5134-D	1 1/16	15/8	1 1/2	1 1/2	11/16
5136	5136-D	1 1/8	15/8	15/8	15/8	3/4
5138	5138-D	13/16	15/8	13/4	13/4	3/4
5140	5140-D	1 1/4	13/4	13/4	13/4	13/16
5142	-	15/16	13/4	17/8	17/8	13/16
5144	5144-D	13/8	17/8	2	2	13/16
5146	-	17/16	2	2	2	15/16
5148	5148-D	1 1/2	2	2 1/8	2 1/8	1
5152	5152-D	15/8	2	2 3/8	2 3/8	11/8
5154	-	1 11/16	2	2 3/8	2 3/8	11/8
5156	-	1 3/4	2	2 1/2	2 1/2	11/8

## 6 POINT AND DOUBLE HEX, THIN WALL, STANDARD LENGTH

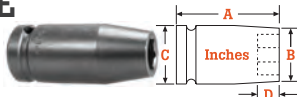


Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5412	5412-D	3/8	1 1/2	19/32	15/16	1/4
5414	5414-D	7/16	1 1/2	21/32	15/16	9/32
5416	5416-D	1/2	1 1/2	23/32	15/16	11/32
5418	5418-D	9/16	1 1/2	13/16	15/16	7/16
5420	5420-D	5/8	1 1/2	7/8	15/16	7/16
5421	5421-D	21/32	1 1/2	29/32	15/16	7/16
-	5422-D	11/16	1 1/2	15/16	15/16	7/16
OS-5424*	-	3/4	1 1/2	11/32	11/32	15/32
5424	5424-D	3/4	1 1/2	11/32	1 1/8	15/32
5426	5426-D	13/16	1 1/2	1 1/8	1 1/8	17/32
HE-1028	HE-1028-D	7/8	1 1/2	1 1/4	1 1/4	9/16
5428*	-	7/8	1 1/2	13/16	1 1/4	9/16
HE-530	-	15/16	1 1/2	15/16	15/16	5/8
5430*	5430-D	15/16	1 1/2	1 1/4	1 1/4	5/8
5432	5432-D	1	1 1/2	13/8	13/8	5/8
5434	5434-D	1 1/16	15/8	17/16	17/16	11/16
5436	5436-D	1 1/8	15/8	1 1/2	1 1/2	3/4
5438	-	13/16	15/8	15/8	15/8	3/4
5440	5440-D	1 1/4	13/4	1 11/16	13/4	13/16
5442	-	15/16	13/4	1 25/32	17/8	13/16

\* No DIN groove

# 1/2" SQUARE DRIVE SOCKETS, SAE

## 6 POINT AND DOUBLE HEX, LONG & EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5210	-	5/16	2 1/4	1/2	15/16	3/16
5310	-	5/16	3 1/4	1/2	15/16	3/16
5212	-	3/8	2 1/4	5/8	15/16	1/4
5312	-	3/8	3 1/4	5/8	15/16	1/4
5214	-	7/16	2 1/4	11/16	15/16	9/32
5314	-	7/16	3 1/4	11/16	15/16	9/32
5216	5216-D	1/2	2 1/4	13/16	15/16	11/32
5316	5316-D	1/2	3 1/4	13/16	15/16	11/32
5218	5218-D	9/16	2 1/4	7/8	15/16	7/16
5318	5318-D	9/16	3 1/4	7/8	15/16	7/16
5220	-	5/8	2 1/4	1	1	7/16
5320	-	5/8	3 1/4	1	1	7/16
5222	-	11/16	2 1/4	1 1/8	1 1/8	7/16
5322	5322-D	11/16	3 1/4	1 1/8	1 1/8	7/16
5224	5224-D	3/4	2 1/4	1 1/8	1 1/8	15/32
5324	5324-D	3/4	3 1/4	1 1/8	1 1/8	15/32
5226	5226-D	13/16	2 1/4	1 1/4	1 1/4	17/32
5228	5228-D	7/8	2 1/4	15/16	15/16	9/16
5328	-	7/8	3 1/2	15/16	15/16	9/16
5326	-	13/16	3 1/2	1 1/4	1 1/4	17/32
5230	5230-D	15/16	2 1/4	13/8	13/8	5/8
5330	5330-D	15/16	3 1/2	13/8	13/8	5/8
5232	-	1	2 1/4	1 1/2	1 1/2	5/8
5332	-	1	3 1/2	1 1/2	1 1/2	5/8
5234	-	1 1/16	2 3/8	1 1/2	1 1/2	11/16
5334	-	1 1/16	3 1/2	1 1/2	1 1/2	11/16
5236	5236-D	1 1/8	2 3/8	15/8	15/8	3/4
5336	5336-D	1 1/8	3 1/2	15/8	15/8	3/4
5238	-	1 3/16	2 3/8	13/4	13/4	3/4
5338	-	1 3/16	3 1/2	13/4	13/4	3/4
5240	5240-D	1 1/4	2 1/2	13/4	13/4	13/16
5340	5340-D	1 1/4	3 1/2	13/4	13/4	13/16
5242	-	1 5/16	2 1/2	17/8	17/8	13/16
5342	-	1 5/16	3 1/2	17/8	17/8	13/16
5244	-	1 3/8	2 1/2	2	2	13/16
5344	-	1 3/8	3 5/8	2	2	13/16
5248	-	1 1/2	2 1/2	2 1/8	2 1/8	1
5348	-	1 1/2	3 3/4	2 1/8	2 1/8	1

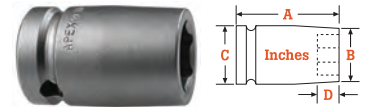
## 6 POINT AND DOUBLE HEX, THIN WALL, EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5510	-	5/16	3 1/4	1/2	15/16	3/16
5512	5512-D	3/8	3 1/4	19/32	15/16	1/4
5514	5514-D	7/16	3 1/4	21/32	15/16	9/32
5516	5516-D	1/2	3 1/4	23/32	15/16	11/32
OS-5516*	-	1/2	3 1/4	47/64	7/8	11/32
5518	5518-D	9/16	3 1/4	13/16	15/16	7/16
OS-5518*	-	9/16	3 1/4	13/16	27/32	7/16
5520	5520-D	5/8	3 1/4	7/8	15/16	7/16
5522	5522-D	11/16	3 1/4	15/16	15/16	7/16
SW-493	-	3/4	2 1/4	1 1/4	1 1/4	15/32
5524	5524-D	3/4	3 1/4	1 1/32	1 1/8	15/32
5526	5526-D	13/16	3 1/2	1 1/8	1 1/8	17/32
5528	5528-D	7/8	3 1/2	13/16	1 1/4	9/16
5530	5530-D	15/16	3 1/2	1 1/4	1 1/4	5/8
5532	5532-D	1	3 1/2	13/8	1 3/8	5/8
5534	5534-D	1 1/16	3 1/2	17/16	17/16	11/16

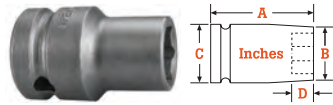
\* No DIN groove

## MAGNETIC, STANDARD LENGTH



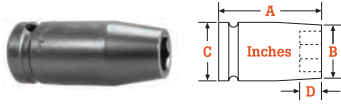
Part No. Fixed Magnet	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
M-5110	5/16	1 1/2	1/2	15/16	3/16
M-5112	3/8	1 1/2	5/8	15/16	1/4
M-5114	7/16	1 1/2	11/16	15/16	9/32
M-5116	1/2	1 1/2	13/16	15/16	11/32
MSH-335	1/2	1 1/2	45/64	15/16	11/32
M-5118	9/16	1 1/2	7/8	15/16	7/16
MSH-336	9/16	1 1/2	27/32	15/16	7/16
M-5120	5/8	1 1/2	1	1	7/16
M-5122	11/16	1 1/2	1 1/8	1 1/8	7/16
M-5124	3/4	1 1/2	1 1/8	1 1/8	15/32

## MAGNETIC, THIN WALL, STANDARD LENGTH



Part No. Fixed Magnet	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
M-5416	1/2	11/2	23/32	15/16	11/32
M-5418	9/16	11/2	13/16	15/16	7/16
M-5420	5/8	11/2	7/8	15/16	7/16

## MAGNETIC, LONG LENGTH & EXTRA LONG LENGTH



Part No. Fixed Magnet	Part No. Bolt Clearance	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	MB-5212	3/8	2-1/4	5/8	15/16	1/4
M-5512*	-	3/8	3-1/4	19/32	15/16	1/4
-	MB-5214	7/16	2-1/4	11/16	15/16	9/32
M-5216	MB-5216	1/2	2-1/4	13/16	15/16	11/32
M-5316	-	1/2	3-1/4	13/16	15/16	11/32
M-5218	-	9/16	2-1/4	7/8	15/16	7/16
-	MB-HE9518	9/16	2-1/4	7/8	15/16	7/16
M-5518*	-	9/16	3-1/4	13/16	15/16	7/16
-	MB-5220	5/8	2-1/4	1	1	7/16

\* Thin wall

## SURFACE DRIVE & FAST LEAD, STANDARD LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-5112	-	3/8	11/2	5/8	15/16	1/4
-	FL-5114	7/16	11/2	11/16	15/16	9/32
SF-5116	FL-5116	1/2	11/2	13/16	15/16	11/32
SF-SH-335	FL-SH-335	1/2	11/2	45/64	15/16	11/32
SF-5118	FL-5118	9/16	11/2	7/8	15/16	7/16
SF-SH-336	-	9/16	11/2	27/32	15/16	7/16
SF-5120	FL-5120	5/8	11/2	1	1	7/16
SF-5122	FL-5122	11/16	11/2	11/8	11/8	7/16
SF-5124	FL-5124	3/4	11/2	11/8	11/8	15/32
SF-SW-282	-	3/4	11/2	11/4	11/4	15/32
SF-5126	FL-5126	13/16	11/2	11/4	11/4	17/32
SF-5128	FL-5128	7/8	11/2	15/16	15/16	9/16
SF-5130	FL-5130	15/16	11/2	13/8	13/8	5/8
SF-5132	FL-5132	1	11/2	11/2	11/2	5/8
SF-5134	FL-5134	11/16	15/8	11/2	11/2	11/16

## SURFACE DRIVE & FAST LEAD, THIN WALL, STANDARD LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-5412	-	3/8	11/2	19/32	15/16	1/4
SF-5414	-	7/16	11/2	21/32	15/16	9/32
SF-5416	FL-5416	1/2	11/2	23/32	15/16	11/32
SF-5418	FL-5418	9/16	11/2	13/16	15/16	7/16
SF-5420	-	5/8	11/2	7/8	15/16	7/16
SF-5422	-	11/16	11/2	15/16	15/16	7/16
SF-5424	-	3/4	11/2	11/32	11/8	15/32
SF-5426	-	13/16	11/2	11/8	11/8	17/32

## SURFACE DRIVE & FAST LEAD, LONG AND EXTRA LONG LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-5212	-	3/8	2 1/4	9/16	15/16	9/32
SF-5216	FL-5216	1/2	2 1/4	13/16	15/16	11/32
-	FL-5316	1/2	3 1/4	13/16	15/16	11/32
SF-HE-9518	FL-HE-9518	9/16	2 1/4	7/8	7/8	7/16
SF-5218	FL-5218	9/16	2 1/4	7/8	15/16	7/16
SF-5318	FL-5318	9/16	3 1/4	7/8	15/16	7/16
SF-5320	FL-5320	5/8	3 1/4	1	1	7/16
SF-5222	FL-5222	11/16	2 1/4	11/8	11/8	7/16
SF-5224	FL-5224	3/4	2 1/4	11/8	11/8	15/32
-	FL-SW-493	3/4	2 1/4	11/4	11/4	15/32
SF-5324	FL-5324	3/4	3 1/4	11/8	11/8	15/32
SF-5226	FL-5226	13/16	2 1/4	11/4	11/4	17/32
-	FL-5326	13/16	3 1/2	11/4	11/4	17/32
SF-5228	FL-5228	7/8	2 1/4	15/16	15/16	9/16
SF-5328	-	7/8	3 1/2	15/16	15/16	9/16
SF-5230	-	15/16	2 1/4	13/8	13/8	5/8
SF-5330	-	15/16	3 1/2	13/8	13/8	5/8
SF-5232	-	1	2 1/4	11/2	11/2	5/8

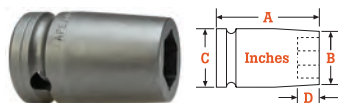
## SURFACE DRIVE, THIN WALL, EXTRA LONG LENGTH



Part No. Surface Drive	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-5514	7/16	3-1/4	21/32	15/16	9/32
SF-5516	1/2	3-1/4	23/32	15/16	11/32
SF-5518	9/16	3-1/4	13/16	15/16	7/16
SF-5520	5/8	3-1/4	7/8	15/16	7/16
SF-5524	3/4	3-1/4	1-1/32	1-1/8	15/32
SF-5526	13/16	3-1/4	1-1/8	1-1/8	17/32
SF-5528	7/8	3-1/2	1-3/16	1-1/4	9/16
SF-5532	1	3-1/2	1-3/8	1-3/8	5/8

# 1/2" SQ. DR. SOCKETS FOR SAE SHEET METAL SCREWS

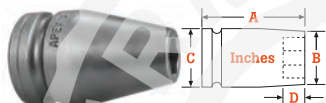
**6 POINT &  
6 POINT  
MAGNETIC, FOR  
PREDRILLED HOLES\***



Part No. 6 Point	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5E10	M5E10	5/16	1 1/2	1/2	15/16	3/16
5E12	M5E12	3/8	1 1/2	5/8	15/16	1/4
-	M5E14	7/16	1 1/2	11/16	15/16	9/32
5E16	M5E16	1/2	1 1/2	13/16	15/16	11/32
-	M5E18	9/16	1 1/2	15/16	15/16	7/16

\* Sockets for predrilled holes are intermediate hardness.

**6 POINT & 6  
POINT MAGNETIC,  
FOR SELF-TAPPING  
SCREWS\***

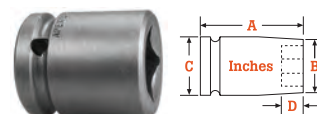


Part No. 6 Point	Part No. Magnetic	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	M5P10	5/16	1 1/2	1/2	15/16	3/16
5P12	M5P12	3/8	1 1/2	5/8	15/16	1/4
5P14	M5P14	7/16	1 1/2	11/16	15/16	9/32
-	M5P16	1/2	1 1/2	13/16	15/16	11/32
-	M5P18	9/16	1 1/2	15/16	15/16	7/16

\* Sockets for self-tapping screws are maximum hardness.

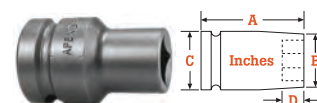
# 1/2" SQ. DR. SOCKETS FOR SAE SQUARE NUTS

**SINGLE SQUARE &  
DOUBLE SQUARE,  
STANDARD LENGTH**



Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5609	-	9/32	1 1/2	1/2	15/16	3/16
5610	5610-D	5/16	1 1/2	5/8	15/16	1/4
5612	5612-D	3/8	1 1/2	3/4	15/16	1/4
5614	5614-D	7/16	1 1/2	7/8	15/16	9/32
5616	5616-D	1/2	1 1/2	1	1	11/32
5618	5618-D	9/16	1 1/2	11/8	11/8	7/16
5620	5620-D	5/8	1-1/2	11/4	1-1/4	7/16
5622	-	11/16	1 1/2	11/4	11/4	7/16
5624	5624-D	3/4	1 1/2	13/8	13/8	15/32
5626	-	13/16	1 1/2	11/2	11/2	17/32
5628	-	7/8	1 1/2	15/8	15/8	5/8
5632	-	1	15/8	13/4	13/4	5/8
5634	-	11/16	13/4	17/8	17/8	11/16
5636	5636-D	11/8	13/4	2	2	3/4

**SINGLE SQUARE &  
DOUBLE SQUARE,  
THIN WALL,  
STANDARD LENGTH**

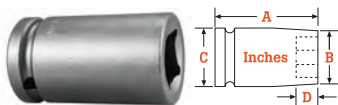


Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5912	5912-D	3/8	1 1/2	11/16	15/16	1/4
5914	5914-D	7/16	1 1/2	25/32	15/16	9/32
5918	5918-D	9/16	1 1/2	1	1	7/16
5920	-	5/8	1 1/2		11/8	7/16



# 1/2" SQ. DR. SOCKETS FOR SAE SQUARE NUTS

## SINGLE SQUARE & DOUBLE SQUARE, LONG & EXTRA LONG LENGTH



Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
5812	-	3/8	3 1/4	3/4	15/16	1/4
5716	-	1/2	2 1/4	1	1	11/32
-	5816-D	1/2	3 1/4	1	1	7/16
5720	-	5/8	2 1/4	1 1/4	1 1/4	7/16
5820	5820-D	5/8	3 1/2	1 1/4	1 1/4	7/16
5822	5822-D	11/16	3 1/2	1 1/4	1 1/4	7/16
5724	5724-D	3/4	2 1/4	1 3/8	1 3/8	15/32
-	5826-D	13/16	3 1/2	1 1/2	1 1/2	17/32
5728	-	7/8	2 1/4	1 5/8	1 5/8	5/8
-	5832-D	1	3 1/2	1 3/4	1 3/4	5/8
-	5834-D	1 1/16	3 1/2	1 7/8	1 7/8	11/16
-	5836-D	1 1/8	3 1/2	2	2	3/4

# 1/2" SQ. DR. SOCKET SET, SAE

## 6 POINT

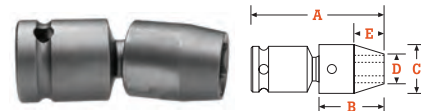


APS58XL

8 piece, extra long length: 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16

# 1/2" SQ. DR. UNIV. WRENCHES, SAE

## 6 POINT & DOUBLE HEX



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
SA-120	SA-120-D	5/16	1 53/64	3/4	3/4	7/16	5/16
SA-216	SA-216-D	3/8	2 11/64	7/8	7/8	9/16	11/32
SA-217	SA-217-D	7/16	2 15/64	15/16	7/8	5/8	13/32
SA-316	-	7/16	2 17/64	15/16	1	5/8	3/8
SA-218	SA-218-D	1/2	2 19/64	1	7/8	11/16	15/32
SA-317	-	1/2	2 31/64	1	1	11/16	7/16
SA-219	SA-219-D	9/16	2 23/64	1 1/16	7/8	3/4	17/32
SA-318	SA-318-D	9/16	2 29/64	1 1/8	1	3/4	9/16
SA-221	SA-221-D	5/8	2 27/64	1 1/8	7/8	7/8	19/32
SA-320	-	5/8	2 33/64	1 3/16	1	27/32	5/8
SA-402	SA-402-D	5/8	2 49/64	1 1/4	1 1/4	7/8	33/64
SA-321	SA-321-D	11/16	2 37/64	1 1/4	1	1	11/16
SA-322	SA-322-D	3/4	2 37/64	1 1/4	1 1/8	1 1/8	11/16
SA-404	SA-404-D	3/4	2 57/64	1 3/8	1 1/4	1 1/32	5/8
SA-501	-	3/4	3 1/32	1 5/8	1 1/2	1 1/8	25/32
SA-406	-	13/16	2 57/64	1 3/8	1 1/4	1 1/8	41/64
SA-407	-	7/8	2 57/64	1 3/8	1 3/16	1 5/16	41/64
SA-409	SA-409-D	15/16	2 57/64	1 3/8	1 5/16	1 5/16	41/64
SA-505	-	15/16	3 5/32	1 3/4	1 1/2	1 3/8	29/32
SA-410	-	1	2 61/64	1 7/16	1 1/2	1 1/2	45/64
SA-411	-	1 1/16	3 1/64	1 1/2	1 1/2	1 1/2	49/64
SA-508	-	1 1/8	3 9/32	1 7/8	1 5/8	1 5/8	11/32
SA-510	-	1 1/4	3 13/32	2	1 3/4	1 3/4	15/32

# 1/2" SQ. DR. IRONBAND™ UNIV. WRENCHES, SAE

## 6 POINT



Part No.	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Opening Depth (E) IN.
SA-C-216	3/8	2.17	.88	.88	.56	.34
SA-C-217	7/16	2.23	.94	.88	.63	.41
SA-C-218	1/2	2.30	1.00	.88	.69	.47
SA-C-219	9/16	2.36	1.06	.88	.75	.53
SA-C-221	5/8	2.42	1.13	.88	.88	.59
SA-C-321	11/16	2.58	1.25	1.00	1.00	.69
SA-C-322	3/4	2.58	1.25	1.00	1.13	.69
SA-C-407	7/8	2.89	1.38	1.25	1.31	.64
SA-C-409	15/16	2.89	1.38	1.25	1.31	.64
SA-C-410	1	2.95	1.44	1.25	1.50	.70
SA-C-411	1 1/16	3.02	1.50	1.25	1.50	.77
SA-C-508	1 1/8	3.28	1.88	1.50	1.63	1.03
SA-C-510	1 1/4	3.41	2.00	1.50	1.75	1.16

# 1/2" SQ. DR. UNIV. WRENCH SET, SAE

## 6 POINT



APU56

6 piece, standard length: 7/16, 1/2, 9/16, 5/8, 11/16, 3/4

# A

### APEX UNIVERSAL WRENCHES & SOCKETS:

APEX Universal Wrenches and Sockets meet the Minimum Proof Torque requirements specified in ASME impact standards B107.2, B107.33M and B107.110. Maximum operating angle is 30 degrees for Universal Wrenches.

# UNIVERSAL WRENCHES 1/2" SQ. DR., SAE – EXT.

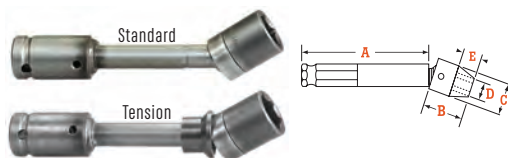
## 6 POINT STANDARD & TENSION TYPE



Part No. Standard	Part No. Tension	Hex Open IN.	Shank Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
-	KN-41-3	5/16	3	3/4	5/8	7/16	3/8
-	KN-41-6	5/16	6	3/4	5/8	7/16	3/8
KH-43-6	KN-43-6	3/8	6	13/16	5/8	17/32	7/16
-	KN-43-9	3/8	9	13/16	5/8	17/32	7/16
KH-44-6	KN-44-6	7/16	6	7/8	5/8	5/8	1/2
KH-45-3	-	1/2	3	7/8	5/8	11/16	1/2
KH-45-4	-	1/2	4	7/8	5/8	11/16	1/2
KH-45-6	KN-45-6	1/2	6	7/8	5/8	11/16	1/2
-	KN-45-9	1/2	9	7/8	5/8	11/16	1/2
KH-104-6	KN-104-6	1/2	6	1	3/4	3/4	9/16
-	KN-104-9	1/2	9	1	3/4	3/4	9/16
KH-202-6	KN-202-6	1/2	6	1	7/8	11/16	15/32
-	KN-202-8	1/2	8	1	7/8	11/16	15/32
KH-105-3	-	9/16	3	1	3/4	13/16	9/16
KH-105-6	KN-105-6	9/16	6	1	3/4	13/16	9/16
-	KN-105-9	9/16	9	1	3/4	13/16	9/16
KH-105-12	KN-105-12	9/16	12	1	3/4	13/16	9/16
KH-203-4	-	9/16	4	1 1/16	7/8	3/4	17/32
KH-203-6	KN-203-6	9/16	6	1 1/16	7/8	3/4	17/32
KH-203-9	KN-203-9	9/16	9	1 1/16	7/8	3/4	17/32
-	KN-203-12	9/16	12	1 1/16	7/8	3/4	17/32
-	KN-318-3	9/16	3	1 1/8	1	3/4	9/16
KH-318-4	KN-318-4	9/16	4	1 1/8	1	3/4	9/16
KH-205-12	-	5/8	12	1 1/8	7/8	7/8	19/32
KH-205-3	-	5/8	3	1 1/8	7/8	7/8	19/32
KH-205-4	-	5/8	4	1 1/8	7/8	7/8	19/32
KH-205-6	KN-205-6	5/8	6	1 1/8	7/8	7/8	19/32
KH-205-D-6	-	5/8	6	1 1/8	7/8	7/8	19/32
-	KN-205-9	5/8	9	1 1/8	7/8	7/8	19/32
KH-205-12	KN-205-12	5/8	12	1 1/8	7/8	7/8	19/32
KH-320-6	KNS-320-D-6	5/8	6	1 3/16	1	27/32	5/8
-	KN-320-12	5/8	12	1 3/16	1	27/32	5/8
KH-321-6	-	11/16	6	1 1/4	1	1	11/16
KH-322-6	KN-322-6	3/4	6	1 1/4	1	1 1/8	11/16
-	KN-322-9	3/4	9	1 1/4	1	1 1/8	11/16
-	KN-322-12	3/4	12	1 1/4	1	1 1/8	11/16
-	KN-404-6	3/4	6	1 3/8	1 1/4	1 1/32	41/64
KH-409-3	-	15/16	3	1 3/8	1 1/4	15/16	41/64
KH-409-4	-	15/16	4	1 3/8	1 1/4	15/16	41/64
KH-409-6	-	15/16	6	1 3/8	1 1/4	15/16	41/64
KH-409-12	-	15/16	12	1 3/8	1 1/4	15/16	41/64
KH-540-6-B-2.75	-	1 1/4	6	2 3/4	1 1/2	1 3/4	129/32

# 1/2" SQ. DR. IRONBAND™ UNIV. WRENCHES, SAE – EXT.

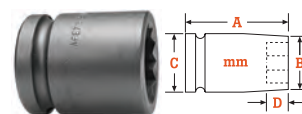
## 6 POINT



Part No. Standard	Part No. Tension	Hex Open IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Opening Depth (E) IN.
KHW-C-43-6	KNW-C-43-6	3/8	6	13/16	5/8	17/32	7/16
KHW-C-44-6	KNW-C-44-6	7/16	6	7/8	5/8	5/8	1/2
KHW-C-45-6	KNW-C-45-6	1/2	6	7/8	5/8	11/16	1/2
–	KNW-C-104-9	1/2	9	1	3/4	3/4	9/16
KHW-C-105-6	KNW-C-105-6	9/16	6	1	3/4	13/16	9/16
KHW-C-105-12	KNW-C-105-12	9/16	12	1	3/4	13/16	9/16
–	KNW-C-203-6	9/16	6	11/16	7/8	3/4	17/32
–	KNW-C-318-6	9/16	6	11/8	1	3/4	9/16
KHW-C-205-6	KNW-C-203-9	9/16	9	11/16	7/8	3/4	17/32
KHW-C-205-12	KNW-C-205-6	5/8	6	11/8	7/8	7/8	19/32
–	KNW-C-205-12	5/8	12	11/8	7/8	7/8	19/32
KHW-C-322-6	KNW-C-322-6	3/4	6	11/4	1	11/8	11/16
–	KNCW-322-9	3/4	9	11/4	1	11/8	11/16
–	KNW-C-322-12	3/4	12	11/4	1	11/8	11/16
–	KNCBUW-C-404-6	3/4	6	13/8	11/4	11/32	41/64
KHW-C-409-6	–	15/16	6	13/8	11/4	15/16	41/64

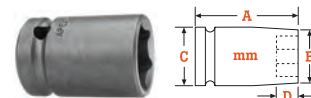
# 1/2" SQUARE DRIVE SOCKETS, METRIC

## 6 POINT & DOUBLE HEX, STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
10MM15	10MM15-D	10	38.1	16.7	23.8	6.4
11MM15	11MM15-D	11	38.1	17.5	23.8	7.2
12MM15	12MM15-D	12	38.1	19.1	23.8	7.2
13MM15	13MM15-D	13	38.1	22.2	23.8	8.7
14MM15	14MM15-D	14	38.1	22.2	23.8	11.1
15MM15	15MM15-D	15	38.1	23.8	23.8	11.1
16MM15	16MM15-D	16	38.1	25.4	25.4	11.1
17MM15	17MM15-D	17	38.1	28.6	28.6	11.1
18MM15	18MM15-D	18	38.1	28.6	28.6	11.1
19MM15	19MM15-D	19	38.1	28.6	28.6	11.9
20MM15	–	20	38.1	31.7	31.7	11.9
21MM15	21MM15-D	21	38.1	31.7	31.7	13.5
22MM15	22MM15-D	22	38.1	33.3	33.3	14.3
23MM15	23MM15-D	23	38.1	34.9	34.9	15.9
24MM15	24MM15-D	24	38.1	34.9	34.9	15.9
25MM15	–	25	38.1	38.1	38.1	15.9
26MM15	26MM15-D	26	38.1	38.1	38.1	15.9
27MM15	27MM15-D	27	41.3	41.3	41.3	17.5
28MM15	–	28	41.3	41.3	41.3	19.1
29MM15	29MM15-D	29	41.3	44.4	44.4	19.1
30MM15	30MM15-D	30	41.3	44.4	44.4	19.1
32MM15	32MM15-D	32	44.4	44.4	44.4	20.6
33MM15	–	33	44.4	47.6	47.6	20.6
34MM15	–	34	47.6	47.5	47.5	20.5
35MM15	–	35	47.6	50.8	50.8	20.6
36MM15	–	36	47.6	50.8	50.8	23.8

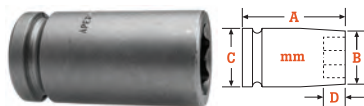
## 6 POINT & DOUBLE HEX, THIN WALL, STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
10MM45	10MM45-D	10	38.1	15.9	23.8	6.4
12MM45	12MM45-D	12	38.1	17.5	23.8	7.2
13MM45	13MM45-D	13	38.1	18.7	23.8	8.7
14MM45	14MM45-D	14	38.1	20.6	23.8	11.1
15MM45	15MM45-D	15	38.1	22.2	23.8	11.1
16MM45	16MM45-D	16	38.1	22.2	23.8	11.1
17MM45	17MM45-D	17	38.1	23.8	23.8	11.1
18MM45	18MM45-D	18	38.1	25.4	25.4	11.1
19MM45	–	19	38.1	26.3	26.3	11.9
21MM45	21MM45-D	21	38.1	28.6	28.6	13.5
22MM45	22MM45-D	22	38.1	30.2	31.7	14.3

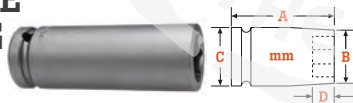
# 1/2" SQUARE DRIVE SOCKETS, METRIC

## 6 POINT & DOUBLE HEX, LONG LENGTH



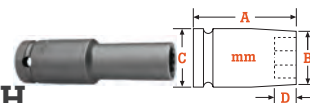
Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
10MM25	10MM25-D	10	57.1	16.7	23.8	6.4
11MM25	-	11	57.1	17.5	23.8	7.2
12MM25	12MM25-D	12	57.1	19.1	23.8	7.2
13MM25	13MM25-D	13	57.1	22.2	23.8	8.7
14MM25	-	14	57.1	22.2	23.8	11.1
15MM25	15MM25-D	15	57.1	23.8	23.8	11.1
16MM25	16MM25-D	16	57.1	25.4	25.4	11.1
17MM25	17MM25-D	17	57.1	28.6	28.6	11.1
18MM25	18MM25-D	18	57.1	28.6	28.6	11.1
19MM25	-	19	57.1	28.6	28.6	11.9
20MM25	20MM25-D	20	57.1	31.7	31.7	11.9
21MM25	21MM25-D	21	57.1	31.7	31.7	13.5
22MM25	22MM25-D	22	57.1	33.3	33.3	14.3
23MM25	23MM25-D	23	57.1	34.9	34.9	15.9
24MM25	24MM25-D	24	57.1	34.9	34.9	15.9
25MM25	-	25	57.1	38.1	38.1	15.9
26MM25	-	26	57.1	38.1	38.1	15.9
27MM25	-	27	60.3	41.3	41.3	17.5
28MM25	-	28	60.3	41.3	41.3	19.1
30MM25	30MM25-D	30	60.3	44.4	44.4	19.1
32MM25	-	32	63.5	44.4	44.4	20.6

## 6 POINT & DOUBLE HEX, EXTRA LONG LENGTH



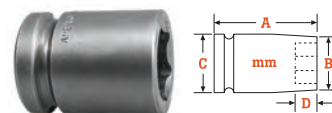
Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
10MM35	10MM35-D	10	82.5	16.7	23.8	6.4
11MM35	-	11	82.5	17.5	23.8	7.2
12MM35	12MM35-D	12	82.5	19.1	23.8	7.2
13MM35	13MM35-D	13	82.5	22.2	23.8	8.7
14MM35	14MM35-D	14	82.5	22.2	23.8	11.1
15MM35	-	15	82.5	23.8	23.8	11.1
16MM35	16MM35-D	16	82.5	25.4	25.4	11.1
17MM35	17MM35-D	17	82.5	28.6	28.6	11.1
18MM35	18MM35-D	18	82.5	28.6	28.6	11.1
19MM35	19MM35-D	19	82.5	28.6	28.6	11.9
20MM35	20MM35-D	20	88.9	31.7	31.7	11.9
21MM35	21MM35-D	21	88.9	31.7	31.7	13.5
22MM35	22MM35-D	22	88.9	33.3	33.3	14.3
24MM35	24MM35-D	24	88.9	34.9	34.9	15.9
25MM35	-	25	88.9	38.1	38.1	15.9

## 6 POINT & DOUBLE HEX, THIN WALL, EXTRA LONG LENGTH



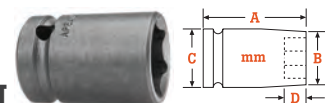
Part No. 6 Point	Part No. Double Hex	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
10MM55	10MM55-D	10	82.5	15.9	23.8	6.4
11MM55	-	11	82.5	16.7	23.8	7.2
12MM55	12MM55-D	12	82.5	17.5	23.8	7.2
13MM55	13MM55-D	13	82.5	18.7	23.8	8.7
14MM55	14MM55-D	14	82.5	20.6	23.8	11.1
15MM55	15MM55-D	15	82.5	22.2	23.8	11.1
16MM55	16MM55-D	16	82.5	22.2	23.8	11.1
17MM55	17MM55-D	17	82.5	23.8	23.8	11.1
18MM55	18MM55-D	18	82.5	25.4	25.4	11.1
19MM55	-	19	82.5	26.3	26.3	11.9
21MM55	21MM55-D	21	88.9	28.6	28.6	13.5
22MM55	22MM55-D	22	88.9	30.2	31.7	14.3
24MM55	24MM55-D	24	88.9	33.3	33.3	15.9
26MM55	-	26	88.9	34.9	34.9	15.9
27MM55	27MM55-D	27	88.9	36.5	38.1	17.5
29MM55	-	29	88.9	38.1	38.1	19.1
30MM55	-	30	88.9	39.7	41.1	19.1
32MM55	-	32	88.9	42.9	42.9	20.6

## MAGNETIC, STANDARD LENGTH



Part No. Fixed Magnet	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-10MM15	10	38.1	16.7	23.8	6.4
M-11MM15	11	38.1	17.5	23.8	7.2
M-12MM15	12	38.1	19.1	23.8	7.2
M-13MM15	13	38.1	22.2	23.8	8.7
M-14MM15	14	38.1	22.2	23.8	11.1
M-15MM15	15	38.1	23.8	23.8	11.1
M-16MM15	16	38.1	25.4	25.4	11.1
M-17MM15	17	38.1	28.6	28.6	11.1
M-18MM15	18	38.1	28.5	28.5	11.1
M-19MM15	19	38.1	28.6	28.6	11.9
M-21MM15	21	38.1	31.7	31.7	13.5

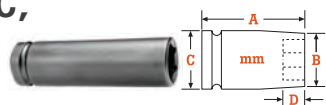
## MAGNETIC, THIN WALL, STANDARD LENGTH



Part No. Fixed Magnet	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-13MM45	13	38.1	18.7	23.8	8.7
M-14MM45	14	38.1	20.6	23.8	11.1
M-15MM45	15	38.1	22.2	23.8	11.1
M-18MM45	18	38.1	25.4	25.4	8.0



## 6 POINT, MAGNETIC, THIN WALL, EXTRA LONG LENGTH



Part Number	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-12MM55	12	82.5	17.4	23.8	5.2
M-14MM55	14	82.5	20.6	23.6	6.4
M-15MM55	15	82.5	22.2	23.8	7.1

## MAGNETIC, LONG LENGTH



Part No. Fixed Magnetic	Part No. Mag. Bolt Clearance	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
	MB-10MM25	10	57.1	16.7	23.8	6.4
	MB-12MM25	12	57.1	19.1	23.8	7.2
M-13MM25	MB-13MM25	13	57.1	22.2	23.8	8.7
	MB-14MM25	14	57.1	22.2	23.8	11.1
M-15MM25	MB-15MM25	15	57.1	23.8	23.8	11.1
	MB-16MM25	16	57.1	25.4	25.4	11.1
	MB-17MM25	17	57.1	28.4	28.4	11.1
M-18MM25	MB-18MM25	18	57.1	28.6	28.5	11.1

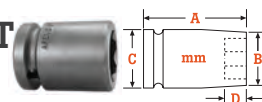
## MAGNETIC, EXTRA LONG LENGTH



Part No. Fixed Magnetic	Part No. Mag. Bolt Clearance	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
M-13MM35	MB-13MM35	13	82.5	22.2	23.8	8.7
M-13MM55		13	82.5	18.7	23.8	8.7
M-15MM35	MB-15MM35	15	82.5	23.8	23.8	11.1
M-18MM35	MB-18MM35	18	82.5	28.6	28.6	11.1
M-18MM55*		18	82.5	25.4	25.4	11.1

\* Thin wall

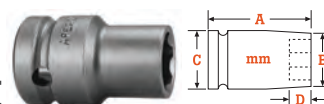
## SURFACE DRIVE SHORT & STANDARD LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.	Mag. / Non-Mag.
SF-10MM15	10	38.1	16.7	23.8	6.4	Non-Mag.
SF-11MM15	11	38.1	17.5	23.8	7.2	Non-Mag.
SF-12MM15	12	38.1	19.1	23.8	7.2	Non-Mag.
SF-13MM15	13	38.1	22.2	23.8	8.7	Non-Mag.
MSF-13MM15*	13	38.1	22.2	23.8	8.7	Magnetic
SF-14MM15	14	38.1	22.2	23.8	11.1	Non-Mag.
SF-15MM15	15	38.1	23.8	23.8	11.1	Non-Mag.
MVESF-126-16MM*	16	33	25.4	25.4	7.9	Non-Mag.
SF-16MM15	16	38.1	25.4	25.4	11.1	Magnetic
MSF-16MM15*	16	38.1	25.4	25.4	11.1	Magnetic
MSF-18MM15*	18	38.1	28.5	28.6	11.1	Magnetic
SF-17MM15	17	38.1	28.6	26.6	11.1	Non-Mag.
SF-18MM15	18	38.1	28.6	28.6	11.1	Non-Mag.
SF-19MM15	19	38.1	28.6	28.6	11.9	Non-Mag.
SF-20MM15	20	38.1	31.7	31.7	11.9	Non-Mag.
SF-21MM15	21	38.1	31.7	31.7	13.5	Non-Mag.
SF-22MM15	22	38.1	33.3	33.3	14.3	Non-Mag.
SF-23MM15	23	38.1	34.9	34.9	15.9	Non-Mag.
SF-24MM15	24	38.1	34.9	34.9	15.9	Non-Mag.

\* Magnetic surface drive

## SURFACE DRIVE, THIN WALL, STANDARD LENGTH

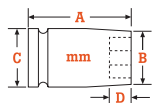


Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-10MM45	10	38.1	15.9	23.8	6.4
SF-11MM45	11	38.1	16.7	23.8	7.2
SF-12MM45	12	38.1	17.5	23.8	7.2
SF-13MM45	13	38.1	18.7	23.8	8.7
SF-14MM45	14	38.1	20.6	23.8	11.1
SF-15MM45	15	38.1	22.2	23.8	11.1
SF-16MM45	16	38.1	22.2	23.8	11.1
SF-17MM45	17	38.1	23.8	23.8	11.1
MSF-17MM45*	17	38.1	23.8	23.8	7.9
SF-18MM45	18	38.1	25.4	25.4	11.1
SF-19MM45	19	38.1	26.3	26.3	11.9
SF-21MM45	21	38.1	28.6	28.6	11.9

\* Magnetic surface drive

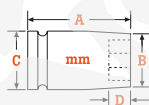
# 1/2" SQUARE DRIVE SOCKETS, METRIC

## SURFACE DRIVE, LONG LENGTH



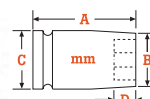
Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-8MM25	8	57.1	12.7	23.6	4.7
SF-10MM25	10	57.1	16.7	23.6	4.7
SF-11MM25	11	57.1	17.5	23.8	7.2
SF-12MM25	12	57.1	19.1	23.8	7.2
SF-13MM25	13	57.1	22.2	23.8	7.2
SF-14MM25	14	57.1	22.2	23.8	11.1
SF-15MM25	15	57.1	23.8	23.8	11.1
SF-16MM25	16	57.1	25.4	25.4	11.1
SF-17MM25	17	57.1	28.6	28.6	11.1
SF-18MM25	18	57.1	28.6	28.6	11.1
SF-19MM25	19	57.1	28.6	28.6	11.9
SF-21MM25	21	57.1	31.7	31.7	13.5
SF-22MM25	22	57.1	33.3	33.3	14.3
SF-24MM25	24	57.1	34.9	34.9	15.9

## SURFACE DRIVE, EXTRA LONG LENGTH



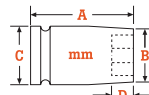
Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-10MM35	10	82.5	16.7	23.8	6.4
SF-12MM35	12	82.5	17.5	23.8	7.2
SF-13MM35	13	82.5	19.1	23.8	7.2
SF-14MM35	14	82.5	22.2	23.8	11.1
SF-15MM35	15	82.5	23.8	23.8	11.1
SF-16MM35	16	82.5	25.4	25.4	11.1
SF-17MM35	17	82.5	28.6	28.6	11.1
SF-18MM35	18	82.5	28.6	28.6	11.1
SF-19MM35	19	82.5	28.6	28.6	11.9
SF-21MM35	21	88.9	31.7	31.7	13.5
SF-22MM35	22	88.9	33.3	33.3	14.3
SF-24MM35	24	88.9	34.9	34.9	15.9

## SURFACE DRIVE, THIN WALL, EXTRA LONG LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-10MM55	10	82.5	15.9	23.8	6.4
SF-11MM55	11	82.5	16.7	23.8	7.2
SF-13MM55	13	82.5	18.7	23.8	8.7
SF-14MM55	14	82.5	20.6	23.8	11.1
SF-15MM55	15	82.5	22.2	23.8	11.1
SF-16MM55	16	82.5	22.2	23.8	11.1
SF-17MM55	17	82.5	23.8	23.8	11.1
SF-18MM55	18	82.5	25.4	25.4	11.1
SF-19MM55	19	82.5	26.3	26.3	11.9
SF-21MM55	21	88.9	28.6	28.6	13.5
SF-22MM55	22	88.9	30.2	31.7	15.9

## 1/2" SQUARE DRIVE SOCKETS FOR METRIC SHEET METAL SCREWS



Part No. 6 Point	Part No. Magentic	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
	M-13MME5	13	38.1	22.2	23.8	8.7
15MME5	M-15MME5	15	38.1	23.8	23.8	11.1

## 1/2" SQ. DR. SOCKET SET, METRIC

### 6 POINT

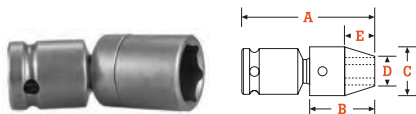


APS511M

11 piece, standard length: 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm

# 1/2" SQ. DR. IRONBAND™ UNIV. WRENCHES, METRIC

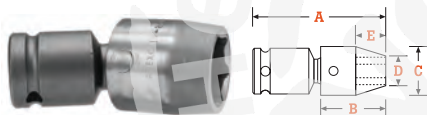
## 6 POINT



Part No. 6 Pt.	Hex Opening MM.	Overall Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
SA-C-57-13M	13	58	25.4	22.2	17.5	11.9
SA-C-57-14M	14	60	27.0	22.2	19.1	13.5
SA-C-58-15M	15	62	28.6	25.4	19.8	14.3
SA-C-58-16M	16	64	30.2	25.4	21.4	15.9
SA-C-58-17M	17	66	31.8	25.4	25.4	17.5
SA-C-58-18M	18	66	31.8	25.4	25.4	17.5
SA-C-510-21M	21	73	34.9	31.8	28.6	16.3
SA-C-510-22M	22	73	34.9	31.8	31.8	16.3

# 1/2" SQUARE DRIVE UNIV. WRENCHES, METRIC

## 6 POINT



Part No. 6 Pt.	Hex Opening MM.	Overall Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
SA-57-13M	13	58	25.4	22.2	17.5	11.9
SA-57-14M	14	60	27.0	22.2	19.1	13.5
SA-58-15M	15	62	28.6	25.4	19.8	14.3
SA-58-16M	16	64	30.2	25.4	21.4	15.9
SA-58-17M	17	66	31.8	25.4	25.4	17.5
SA-58-18M	18	66	31.8	25.4	25.4	17.5
SA-58-19M	19	66	31.8	25.4	28.6	17.5
SA-510-19M	19	73	34.9	31.8	26.2	16.3
SA-510-20M	20	73	34.9	31.8	27.0	16.3
SA-510-21M	21	73	34.9	31.8	28.6	16.3
SA-510-22M	22	73	34.9	31.8	31.8	16.3
SA-510-24M	24	73	34.9	31.8	34.9	16.3

# 1/2" SQUARE DRIVE UNIV. WRENCH SET, METRIC

## 6 POINT



APU56M

6 piece, standard length: 13mm, 14mm, 15mm, 16mm, 17mm, 18mm

# 1/2" SQ. DR. UNIVERSAL WRENCHES, METRIC – EXTENSION

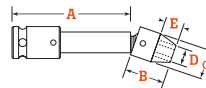
## 6 POINT, STANDARD AND TENSION TYPE



Standard



Tension



Part No. Standard	Part No. Tension	Hex Opening MM.	Shank Length (A) MM.	Socket Length (B) MM.	Socket Dia. (C) MM.	Nose End Dia. (D) MM.	Clearance Depth (E) MM.
–	KN-7-12M-6	12	152	23.8	22.2	17.5	10.3
–	KN-7-12M-9	12	229	23.8	22.2	17.5	10.3
KH-7-13M-3	–	13	76	25.4	22.2	17.5	11.9
KH-7-13M-4	–	13	102	25.4	22.2	17.5	11.9
KH-7-13M-6	KN-7-13M-6	13	152	25.4	22.2	17.5	11.9
KH-7-13M-9	KN-7-13M-9	13	229	25.4	22.2	17.5	11.9
–	KN-7-13M-12	13	305	25.4	22.2	17.5	11.9
KH-7-14M-6	KN-7-14M-6	14	152	27.0	22.2	19.1	13.5
–	KN-7-14M-9	14	229	27.0	22.2	19.1	13.5
KH-8-14M-6	–	14	152	28.6	25.4	19.1	14.3
KH-8-15M-3	KN-8-15M-3	15	76	28.6	25.4	19.8	14.3
KH-8-15M-6	KN-8-15M-6	15	152	28.6	25.4	19.8	14.3
KH-8-15M-9	KN-8-15M-9	15	229	28.6	25.4	19.8	14.3
–	KN-8-15M-12	15	305	28.6	25.4	19.8	14.3
KH-8-16M-3	–	16	76	30.2	25.4	21.4	15.9
KH-8-16M-4	–	16	102	30.2	25.4	21.4	15.9
KH-8-16M-6	KN-8-16M-6	16	152	30.2	25.4	21.4	15.9
KH-8-16M-9	KN-8-16M-9	16	229	30.2	25.4	21.4	15.9
KH-8-16M-12	KN-8-16M-12	16	305	30.2	25.4	21.4	15.9
KH-8-17M-3	–	17	76	31.8	25.4	25.4	17.5
KH-8-17M-4	–	17	102	31.8	25.4	25.4	17.5
KH-8-17M-6	KN-8-17M-6	17	152	31.8	25.4	25.4	17.5
KH-8-17M-9	KN-8-17M-9	17	229	31.8	25.4	25.4	17.5
KH-8-18M-3	KN-8-18M-3	18	76	31.8	25.4	25.4	17.5
KH-8-18M-4	–	18	102	31.8	25.4	25.4	17.5
KH-8-18M-6	KN-8-18M-6	18	152	31.8	25.4	25.4	17.5
KH-8-18M-9	KN-8-18M-9	18	229	31.8	25.4	25.4	17.5
–	KN-8-18M-12	18	305	31.8	25.4	25.4	17.5
KH-10-19M-3	–	19	76	34.9	31.8	26.2	16.2
KH-10-19M-6	–	19	152	34.9	31.8	26.2	16.2
KH-10-19M-9	–	19	229	34.9	31.8	26.2	16.2
KH-10-19M-12	–	19	305	34.9	31.8	26.2	16.2
–	KN-10-24M-6	24	152	34.9	31.8	34.9	16.2
–	KNS-8-18M-4	18	102	31.8	25.4	25.4	17.5



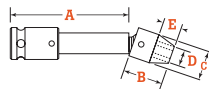
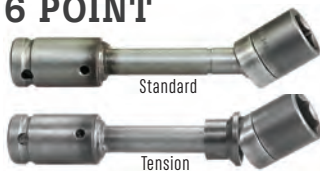
### APEX UNIVERSAL WRENCHES & SOCKETS:

APEX Universal Wrenches and Sockets meet the Minimum Proof Torque requirements specified in ASME impact standards B107.2, B107.33M and B107.110. Maximum operating angle is 30 degrees for Universal Wrenches.



# 1/2" SQ. DR. IRONBAND™ UNIV. WRENCHES, METRIC – EXTENSION

## 6 POINT

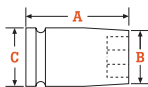


Part No. Standard	Part No. Tension	Hex Open	Overall Length (A)	Socket Length (B)	Socket Dia. (C)	Nose End Dia. (D)	Clearance Depth (E)
-------------------	------------------	----------	--------------------	-------------------	-----------------	-------------------	---------------------

Part No. Standard	Part No. Tension	Hex Open	Overall Length (A)	Socket Length (B)	Socket Dia. (C)	Nose End Dia. (D)	Clearance Depth (E)
KHW-C-7-13M-6	KNW-C-7-13M-6	13	152	25.4	22.2	17.5	11.9
KHW-C-7-13M-9	KNW-C-7-13M-9	13	229	25.4	22.2	17.5	11.9
KHW-C-7-14M-6	KNW-C-7-14M-6	14	152	27.0	22.2	19.1	13.5
KHW-C-8-15M-6	KNW-C-8-15M-6	15	152	28.6	25.4	19.8	14.3
KHW-C-8-15M-9	—	15	229	28.6	25.4	19.8	14.3
—	KNW-C-8-15M-12	15	305	28.6	25.4	19.8	14.3
KHW-C-8-16M-6	—	16	152	30.2	25.4	21.4	15.9
KHW-C-8-16M-9	KNW-C-8-16M-9	16	229	30.2	25.4	21.4	15.9
KHW-C-8-17M-6	KNW-C-8-17M-6	17	152	31.8	25.4	25.4	17.5
KHW-C-8-17M-9	KNW-C-8-17M-9	17	229	31.8	25.4	25.4	17.5
KHW-C-8-18M-4	—	18	102	31.8	25.4	25.4	17.5
KHW-C-8-18M-6	KNW-C-8-18M-6	18	152	31.8	25.4	25.4	17.5
KHW-C-8-18M-9	KNW-C-8-18M-9	18	229	31.8	25.4	25.4	17.5

# 1/2" SQ. DR. SOCKETS FOR SPLINE FASTENERS

## STANDARD & LONG LENGTH



Part No.	Spline Size	Nominal Size IN.	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.	Mag./ Non-Mag.
CMS-5416	16	1/2	11/4 32	23/32 18	7/8 22	Non-Magnetic
CMS-5422	22	11/16	11/2 38	31/32 25	31/32 25	Non-Magnetic
CMS-5426	26	13/16	11/2 38	11/8 29	11/8 29	Non-Magnetic
CMS-5430	30	15/16	11/2 38	11/4 32	11/4 32	Non-Magnetic

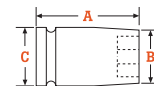


## APEX SPLINE SOCKETS:

APEX Spline Sockets conform to military specifications MS-37787 and MIL-W-8982C.

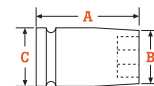
# 1/2" SQ. DR. TORX® SOCKETS

## FOR EXTERNAL TORX SCREWS



Part Number	Part No. Fixed Magnet	Driver Size	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
TX-5110	—	E-10	11/2 38	9/16 13	1 25
TX-5112	—	E-12	11/2 38	5/8 16	1 25
TX-5114	—	E-14	11/2 38	11/16 18	1 25
TX-5116	—	E-16	11/2 38	13/16 21	1 25
TX-5118	MTX-5118	E-18	11/2 38	7/8 22	1 25
TX-5120	—	E-20	11/2 38	1 25	13/16 30
TX-5124	—	E-24	11/2 38	15/16 33	15/16 33

## FOR EXTERNAL TORX SCREWS, THIN WALL



Part Number	Driver Size	Overall Length (A) IN. MM.	Nose End Dia. (B) IN. MM.	Drive End Dia. (C) IN. MM.
TX-5408	E-8	11/2 38	3/8 10	7/8 22
TX-5410	E-10	11/2 38	1/2 13	7/8 22
TX-5412	E-12	11/2 38	9/16 14	7/8 22
TX-5414	E-14	11/2 38	5/8 16	7/8 22
TX-5416	E-16	11/2 38	7/8 22	7/8 22
TX-5418	E-18	11/2 38	15/16 24	15/16 24
TX-5420	E-20	11/2 38	11/16 27	11/16 27

# 1/2" SQ. DR. EXTENSIONS

## 1 23/32" TO 18" LENGTH



Part Number	Male Square IN.	Type of Lock	Overall Length IN. MM.	
EX-504	1/2	Pin	1 23/32	44
EX-504-B	1/2	Ball	1 23/32	44
EX-508-2	1/2	Pin	2	51
EX-508-B-2	1/2	Ball	2	51
EX-508-3	1/2	Pin	3	76
EX-508-B-3	1/2	Ball	3	76
EX-508-4	1/2	Pin	4	102
EX-508-B-4	1/2	Ball	4	102
EX-508-5	1/2	Pin	5	127
EX-508-B-5	1/2	Ball	5	127
EX-508-6	1/2	Pin	6	152
EX-508-B-6	1/2	Ball	6	152
EX-508-8	1/2	Pin	8	203
EX-508-B-8	1/2	Ball	8	203
EX-508-9	1/2	Pin	9	229
EX-508-B-9	1/2	Ball	9	229
EX-508-10	1/2	Pin	10	254
EX-508-B-10	1/2	Ball	10	254
EX-508-12	1/2	Pin	12	305
EX-508-B-12	1/2	Ball	12	305
EX-508-15	1/2	Pin	15	381
EX-508-B-15	1/2	Ball	15	381
EX-508-16	1/2	Pin	16	406
EX-508-18	1/2	Pin	18	457
EX-508-24	1/2	Pin	24	610

# 1/2" SQ. DR. ADAPTERS

## 1/4" TO 3/4" MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length IN. MM.	
EX-260	1/2	1/4	Pin	1 1/2	38
EX-260-B	1/2	1/4	Ball	1 1/2	38
EX-258-B-2	1/2	1/4	Ball	2	51
EX-258-4	1/2	1/4	Pin	4	102
EX-375	1/2	3/8	Pin	1 1/2	38
EX-375-B	1/2	3/8	Ball	1 1/2	38
EX-377-2	1/2	3/8	Pin	2	51
EX-377-B-2	1/2	3/8	Ball	2	51
EX-377-3	1/2	3/8	Pin	3	76
EX-377-B-3	1/2	3/8	Ball	3	76
EX-377-4	1/2	3/8	Pin	4	102
EX-377-B-4	1/2	3/8	Ball	4	102
EX-377-5	1/2	3/8	Pin	5	127
EX-377-B-5	1/2	3/8	Ball	5	127
EX-377-6	1/2	3/8	Pin	6	152
EX-377-B-6	1/2	3/8	Ball	6	152
EX-377-8	1/2	3/8	Pin	8	203
EX-377-B-8	1/2	3/8	Ball	8	203
EX-377-10	1/2	3/8	Pin	10	254
EX-377-B-10	1/2	3/8	Ball	10	254
EX-377-12	1/2	3/8	Pin	12	305
EX-377-B-12	1/2	3/8	Ball	12	305
EX-377-15	1/2	3/8	Pin	15	381
EX-623	1/2	5/8	Pin	1 1/2	38
EX-623-B	1/2	5/8	Ball	1 1/2	38
EX-626-3	1/2	5/8	Pin	3	76
EX-751	1/2	3/4	7/32 drill hole	1 13/16	46
EX-751-B	1/2	3/4	Ball	1 13/16	46

# 1/2" SQ. DR. UNIVERSAL ADAPTERS

## 3/8" TO 3/4" MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length		Largest Dia.	
				IN.	MM.	IN.	MM.
MF-39	1/2	3/8	Pin	2 9/16	65	7/8	22
MF-39B	1/2	3/8	Ball	2 9/16	65	7/8	22
MF-50	1/2	1/2	Pin	2 11/16	68	1	25
MF-50B	1/2	1/2	Ball	2 11/16	68	1	25
MF-55	1/2	1/2	Pin	3 1/16	78	1 1/4	32
MF-55B	1/2	1/2	Ball	3 1/16	78	1 1/4	32
MF-70	1/2	3/4	7/32 drill hole	3 5/8	92	1 1/2	38
MF-70B	1/2	3/4	Ball	3 5/8	92	1 1/2	38

# 1/2" SQ. DR. UNIV. ADAPTERS – EXT.

## 1/2" MALE SQUARE

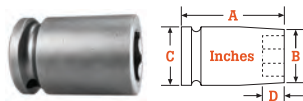


Part Number	Part No. Tension	Female Square IN.	Male Square IN.	Type of Lock	Largest Dia.	
					IN.	MM.
KHM-37-6	KNM-37-6	1/2	3/8	Pin	3/4	19
KHM-38-6	KNM-38-6	1/2	3/8	Pin	7/8	22
KHM-50-3	KNM-50-3	1/2	1/2	Pin	1	25
KHM-50-6	KNM-50-6	1/2	1/2	Pin	1	25
KHM-50-B-6	KNM-50-B-6	1/2	1/2	Ball	1	25

Maximum operating angle when using Universal Wrench is 30 degrees.

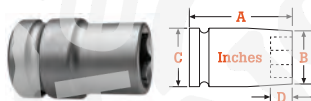
# 5/8" SQUARE DRIVE SOCKETS, SAE

## 6 POINT & DOUBLE HEX, STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
6118	-	9/16	17/8	7/8	11/4	7/16
6120	6120-D	5/8	17/8	1	11/4	7/16
6122	-	11/16	17/8	11/8	11/4	7/16
6124	-	3/4	17/8	11/4	11/4	15/32
6128	-	7/8 in	17/8	13/8	13/8	9/16
6134	-	11/16	2	15/8	15/8	11/16
6136	-	11/8	2	15/8	15/8	3/4
6140	-	11/4	2	17/8	17/8	13/16
6142	-	15/16	2	2	2	13/16
6144	-	13/8	21/8	2	2	13/16
6146	-	17/16	21/8	21/8	21/8	15/16
6148	-	11/2	21/4	21/8	21/8	1

## 6 POINT, THIN WALL STANDARD LENGTH



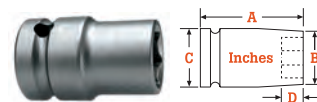
Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
6426	13/16	17/8	11/8	11/4	17/32
6430	15/16	2	15/16	15/16	5/8

## 6 POINT, EXTRA LONG LENGTH



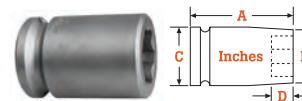
Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
6320	5/8	3 1/2	1	11/4	7/16
6322	11/16	3 1/2	11/8	11/4	7/16
6324	3/4	3 1/2	11/4	11/4	15/32
6326	13/16	3 1/2	11/4	11/4	17/32
6330	15/16	3 1/2	11/2	11/2	5/8
6336	11/8	3 1/2	15/8	15/8	3/4
6340	11/4	3 1/2	17/8	17/8	13/16
6342	15/16	3 1/2	2	2	13/16
6344	13/8	3 1/2	2	2	13/16
6348	11/2	3 1/2	21/8	21/8	1

## 6 POINT & DOUBLE HEX, THIN WALL, EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	6520-D	5/8	3 1/2	15/16	11/4	7/16
6524	6524-D	3/4	3 1/2	11/16	11/4	15/32
-	6528-D	7/8	3 1/2	13/16	11/4	9/16

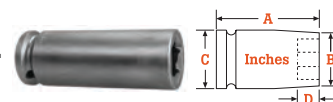
## SURFACE DRIVE & FAST LEAD, STANDARD LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-6118	-	9/16	17/8	7/8	11/4	7/16
SF-6120	-	5/8	17/8	1	11/4	7/16
SF-6124	FL-6124	3/4	17/8	11/4	11/4	15/32
SF-6424*	-	3/4	17/8	11/16	11/4	15/32
SF-6128	FL-6128	7/8	17/8	13/8	13/8	9/16

\*Thin wall

## SURFACE DRIVE & FAST LEAD, EXTRA LONG LENGTH



Part No. Surface Drive	Part No. Fast Lead	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
SF-6320	-	5/8	3 1/2	1	11/4	7/16
SF-6324	FL-6324	3/4	3 1/2	11/4	11/4	15/32
SF-6524*	-	3/4	3 1/2	11/16	11/4	15/32
SF-6326	-	13/16	3 1/2	11/4	11/4	17/32
SF-6328	-	7/8	3 1/2	13/8	13/8	9/16
SF-6330	-	15/16	3 1/2	11/2	11/2	5/8

\*Thin wall



# 5/8" SQ. DR. SOCKETS, METRIC

## 6 POINT & SURFACE DRIVE, STANDARD LENGTH



Part No. 6 Point	Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
-	SF-15MM16	15	48	23.8	31.8	11.1
16MM16	SF-16MM16	16	48	25.4	31.8	11.1
17MM16	SF-17MM16	17	48	28.6	31.8	11.1
18MM16	SF-18MM16	18	48	28.5	31.8	11.1
-	SF-19MM16	19	48	31.8	31.8	11.9
21MM16	SF-21MM16	21	48	31.8	31.8	13.5
-	SF-22MM16	22	48	34.9	34.9	14.3
24MM16	SF-24MM16	24	51	38.1	38.1	15.9

## 6 POINT & SURFACE DRIVE, EXTRA LONG LENGTH



Part No. 6 Point	Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
-	SF-15MM36	15	89	23.8	31.8	11.1
17MM36	-	17	89	25.4	31.8	11.1
-	SF-18MM36	18	89	28.6	31.8	11.1
19MM36	SF-19MM36	19	89	31.8	31.8	11.9
21MM36	SF-21MM36	21	89	31.8	31.8	13.5
-	SF-22MM36	22	89	34.9	34.9	14.3
24MM36	SF-24MM36	24	89	38.1	38.1	15.9

# 5/8" SQ. DR. UNIV. ADAPTERS

## 1/2" TO 5/8" MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length IN. MM.	Largest Dia. IN. MM.
MF-62	5/8	5/8	Pin	3 1/4 83	1 1/4 32
MF-62B	5/8	5/8	Ball	3 1/4 83	1 1/4 32
MF-51	5/8	1/2	Pin	3 5/16 84	1 1/4 32

# 5/8" SQ. DR. EXT.

## 1 7/8" TO 12"



Part Number	Male Square IN.	Type of Lock	Overall Length IN. MM.
EX-624	5/8	Pin	1 7/8 48
EX-624-B	5/8	Ball	1 7/8 48
EX-627-3	5/8	Pin	2 76
EX-627-4	5/8	Pin	4 102
EX-627-6	5/8	Pin	6 152
EX-627-8	5/8	Pin	8 203
EX-627-10	5/8	Pin	10 254
EX-627-12	5/8	Pin	12 305

# 5/8" SQ. DR. ADAPTERS

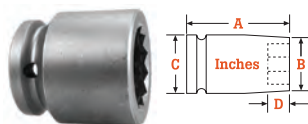
## 1/2" TO 3/4" MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length IN. MM.
EX-505	5/8	1/2	Pin	1 7/8 48
EX-505-B	5/8	1/2	Ball	1 7/8 48
EX-509-3	5/8	1/2	Pin	3 76
EX-509-4	5/8	1/2	Pin	4 102
EX-509-5	5/8	1/2	Pin	5 127
EX-509-6	5/8	1/2	Pin	6 152
EX-509-10	5/8	1/2	Pin	10 254
EX-509-12	5/8	1/2	Pin	12 305
EX-752	5/8	3/4	7/32 Drill Hole	1 7/8 48
EX-752-B	5/8	3/4	Ball	1 7/8 48

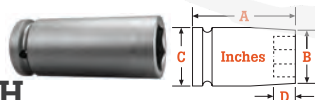
# 3/4" SQUARE DRIVE SOCKETS, SAE

## 6 POINT & DOUBLE HEX, STANDARD LENGTH



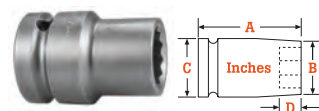
Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
7120	7120-D	5/8	2	11/16	11/2	7/16
7122	7122-D	11/16	2	11/8	11/2	7/16
7124	7124-D	3/4	2	11/4	11/2	15/32
7128	7128-D	7/8	2	11/2	11/2	9/16
7130	7130-D	15/16	2	11/2	11/2	5/8
7132	7132-D	1	2	15/8	15/8	5/8
7134	7134-D	11/16	2	13/4	13/4	11/16
7136	7136-D	11/8	21/8	13/4	13/4	3/4
7140	7140-D	11/4	21/8	2	13/4	13/16
7142	7142-D	15/16	21/8	2	13/4	13/16
7144	-	13/8	21/8	21/8	21/8	13/16
7146	-	17/16	21/4	21/4	21/8	15/16
7148	7148-D	11/2	21/4	21/4	21/8	1
7152	7152-D	15/8	21/4	21/2	21/8	11/8
7154	7154-D	111/16	21/4	21/2	21/8	11/8
7156	-	13/4	21/4	25/8	21/8	11/8
7158	-	113/16	21/4	23/4	21/8	11/4
7160	7160-D	17/8	21/4	23/4	21/8	1-1/4
7164	7164-D	2	23/8	27/8	21/8	1-3/8
7168	-	21/8	23/8	31/8	21/8	13/8
7170	7170-D	23/16	21/2	31/8	21/8	11/2
7172	7172-D	21/4	21/2	31/4	21/8	11/2
7176	-	23/8	25/8	31/2	21/8	15/8
7180	7180-D	21/2	25/8	31/2	21/8	15/8

## 6 POINT & DOUBLE HEX, THIN WALL, EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
7524	-	3/4	4	11/8	13/8	15/32
7528	-	7/8	4	13/8	13/8	9/16
7530	7530-D	15/16	4	13/8	13/8	5/8
7536	7536-D	11/8	4	15/8	15/8	3/4
7540	-	11/4	4	13/4	13/4	13/16
7542	-	15/16	4	17/8	13/4	13/16
7548	-	11/2	4	21/8	21/8	1
7552	-	15/8	4	21/4	21/8	11/8
7556	-	13/4	4	21/2	21/8	11/8

## 6 POINT & DOUBLE HEX, THIN WALL STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
7424	7424-D	3/4	2	11/8	13/8	15/32
7426	-	13/16	2	11/4	13/8	17/32
7428	7428-D	7/8	2	15/16	13/8	9/16
7430	7430-D	15/16	2	13/8	13/8	5/8
7432	-	1	2	17/16	17/16	5/8
7434	-	11/16	2	11/2	11/2	11/16
7436	-	11/8	21/8	15/8	15/8	3/4
7438	-	13/16	21/8	15/8	15/8	3/4
7442	7442-D	15/16	21/8	17/8	13/4	13/16
7446	-	17/16	21/4	2	13/4	15/16
7448	-	11/2	21/4	21/8	21/8	1
7454	-	111/16	21/4	23/8	21/8	11/8
7456	-	13/4	21/4	27/16	21/8	11/8

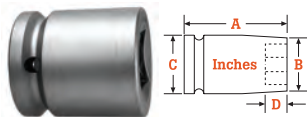
## 6 POINT & DOUBLE HEX, EXTRA LONG LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
7324SKT	7324-D	3/4	4	11/4	11/2	15/32
7328	-	7/8	4	17/16	11/2	9/16
7330	7330-D	15/16	4	11/2	11/2	5/8
7332	7332-D	1	4	11/2	11/2	5/8
7334	-	11/16	4	15/8	15/8	11/16
7336	7336-D	11/8	4	13/4	13/4	3/4
7340	-	11/4	4	17/8	13/4	13/16
7342	-	1-5/16	4	2	13/4	13/16
7346	-	17/16	4	21/8	21/8	15/16
7348	-	11/2	4	21/4	21/8	1
7352	-	15/8	4	21/2	21/8	11/8
7358	-	113/16	4	23/4	21/8 in	11/4
7360	-	17/8	4	23/4	21/8	11/4
7364	-	2	41/8	27/8	21/8	13/8
7372	-	21/4	41/4	31/4	21/8	11/2

# 3/4" SQUARE DRIVE SOCKETS FOR SAE SQUARE NUTS

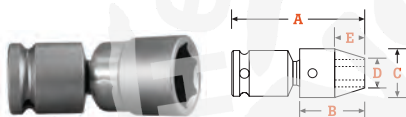
## SINGLE SQUARE & DOUBLE SQUARE, STANDARD LENGTH



Part No. Single Square	Part No. Double Square	Square Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
7624	-	3/4	2	1 1/2	1 1/2	15/32
7628	-	7/8	2	1 3/4	1 3/4	5/8
7630	-	15/16	2 1/8	1 7/8	1 3/4	5/8
7632	-	1	2 1/8	2	1 3/4	5/8
7636	-	1 1/8	2 1/8	2 1/8	2 1/8	3/4
-	7836-D	1 1/8	4	2 1/8	2 1/8	3/4

# 3/4" SQUARE DRIVE UNIVERSAL WRENCHES, SAE

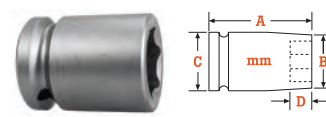
## 6 POINT



Part No. 6 Pt.	Hex Opening IN.	Overall Length (A) IN.	Socket Length (B) IN.	Socket Dia. (C) IN.	Nose End Dia. (D) IN.	Clearance Depth (E) IN.
SA-535	15/16	3 25/32	1 3/4	1 1/2	1 3/8	29/32
SA-537	1 1/16	3 29/32	1 7/8	1 1/2	1 5/8	1 1/32
SA-538	1 1/8	3 29/32	1 7/8	1 1/2	1 5/8	1 1/32
SA-601	15/16	4 1/32	1 15/16	1 3/4	1 1/2	29/32
SA-603	1 1/16	4 3/32	2	1 3/4	1 5/8	31/32
SA-604	1 1/8	4 5/32	2 1/16	1 3/4	1 3/4	1 1/32
SA-606	1 1/4	4 7/32	2 1/8	1 3/4	1 7/8	1 3/32
SA-607	1 5/16	4 7/32	2 1/8	1 3/4	1 7/8	1 3/32
SA-609	1 7/16	4 11/32	2 1/4	1 3/4	2 1/8	1 5/32
SA-610	1 1/2	4 11/32	2 1/4	1 3/4	2 1/4	1 5/32
SA-712	1 5/8	4 11/32	2 3/8	2	2 3/8	1 3/16
SA-715	1 13/16	4 11/32	2 3/8	2	2 5/8	1 3/16
SA-716	1 7/8	4 11/32	2 3/8	2	2 5/8	1 3/16
SA-718	2	4 15/32	2 1/2	2	2 7/8	1 5/16

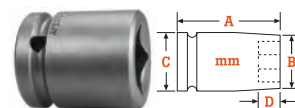
# 3/4" SQ. DR. SOCKETS, METRIC

## 6 POINT, STANDARD LENGTH



Part No. 6 Point	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
17MM17	17	51	31.8	38.1	11.1
18MM17	18	51	28.6	38.1	11.1
19MM17	19	51	31.8	38.1	11.9
20MM17	20	51	33.3	38.1	11.9
21MM17	21	51	34.9	38.1	13.5
22MM17	22	51	38.1	38.1	14.3
22MM47	22	51	33.3	34.9	14.3
24MM17	24	51	38.1	38.1	15.9
24MM47	24	51	34.9	34.9	15.9
26mm17	26	51	41.3	41.3	15.9
27MM17	27	51	44.4	44.4	17.5
27MM47	27	51	38.1	38.1	17.5
29MM17	29	54	47.6	44.4	19.1
30MM17	30	54	47.6	44.4	19.1
30MM47	30	54	41.3	41.3	19.1
32MM17	32	54	50.8	44.4	20.6
32MM47	32	54	44.4	44.4	20.6
33MM17	33	54	50.8	44.4	20.6
36MM17	36	57	57.1	54.0	23.8
37MM17	37	57	57.1	54.0	23.8
41MM17	41	57	63.5	54.0	31.8
46MM17	46	57	69.9	54.0	31.8

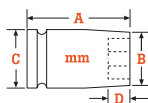
## 6 POINT & SURFACE DRIVE, STANDARD & LONG LENGTH



Part No. Surface Drive	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
SF-15MM17	15	51	23.6	38.1	11.1
VGSF-19-15MM	15	51	24.0	38.1	11.9
SF-16MM17	16	51	27	38.1	11.1
SF-17MM17	17	51	28.6	38.1	11.1
SF-18MM17	18	51	28.6	38.1	11.1
SF-18MM47	18	51	23.8	34.9	11.9
SF-18MM37	18	102	28.6	38.1	11.1
SF-19MM17	19	51	31.8	38.1	11.9
SF-21MM17	21	51	34.9	38.1	13.5
SF-21MM37	21	102	34.9	38.1	13.5
SF-22MM37	22	102	36.6	38.1	14.3
SF-24MM17	24	51	38.1	38.1	15.9
SF-24MM37	24	102	38.1	38.1	15.9

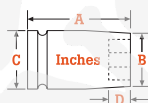
## 3/4" SQ. DR. SOCKETS, METRIC

### 6 POINT, EXTRA LONG LENGTH



Part No. 6 Point	Hex Opening IN.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
21MM37	21	102	34.9	38.1	13.5
24MM37	24	102	38.1	38.1	15.9
25MM37	25	102	38.1	38.1	15.9
27MM37	27	102	41.3	41.3	17.5
28MM37	28	101.6	44.4	44.4	19.1
29MM37	29	101.6	44.4	44.4	19.1
30MM37	30	101.6	44.4	44.4	19.1
32MM37	32	101.6	47.6	44.4	20.6
33MM37	33	101.6	50.8	44.4	20.6
34MM37	34	101.6	54.0	54.0	20.6
36MM37	36	101.6	54.0	54.0	23.8
41MM37	41	101.6	63.5	54.0	28.6
VGSF-20-15MM	15	133.4	24.7	38.1	8.7

### 6 POINT, THIN WALL EXTRA LONG LENGTH



Part No. 6 Point	Hex Opening IN.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
21MM57	21	102	34.9	34.9	13.5
22MM57	22	102	34.9	34.9	14.3
24MM57	24	102	34.9	34.9	15.9
27MM57	27	101.6	38.1	38.1	17.5
30MM57	30	101.6	42.9	42.9	19.1

## 3/4" SQ. DR. EXTENSIONS

2 1/4" TO 15"



Part Number	Male Square IN.	Type of Lock	Overall Length IN. MM.	
EX-753	3/4	7/32 Drill Hole	2 1/4	57
EX-753-B	3/4	Ball	2 1/4	57
EX-755-4	3/4	7/32 Drill Hole	4	102
EX-755-B-4	3/4	Ball	4	102
EX-755-6	3/4	7/32 Drill Hole	6	152
EX-755-B-6	3/4	Ball	6	152
EX-755-8	3/4	7/32 Drill Hole	8	203
EX-755-B-8	3/4	Ball	8	203
EX-755-10	3/4	7/32 Drill Hole	10	254
EX-755-12	3/4	7/32 Drill Hole	12	305
EX-755-B-12	3/4	Ball	12	305
EX-755-15	3/4	7/32 Drill Hole	15	381
EX-755-B-15	3/4	Ball	15	381

## 3/4" SQ. DR. ADAPTERS

1/2" TO 1"  
MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length IN. MM.	
EX-506	3/4	1/2	Pin	2	51
EX-506-B	3/4	1/2	Ball	2	51
EX-510-3	3/4	1/2	Pin	3	76
EX-510-B-3	3/4	1/2	Ball	3	76
EX-510-4	3/4	1/2	Pin	4	102
EX-510-B-4	3/4	1/2	Ball	4	102
EX-510-B-5	3/4	1/2	Ball	5	127
EX-510-6	3/4	1/2	Pin	6	152
EX-510-B-6	3/4	1/2	Ball	6	152
EX-510-8	3/4	1/2	Pin	8	203
EX-510-B-8	3/4	1/2	Ball	8	203
EX-625	3/4	5/8	Pin	2	51
EX-625-B	3/4	5/8	Ball	2	51
EX-628-3	3/4	5/8	Pin	3	76
EX-1000	3/4	1	9/32 Drill Hole	2 9/16	65
EX-1000-B	3/4	1	Ball	2 9/16	65

# 3/4" SQ. DR. UNIV. ADAPTERS

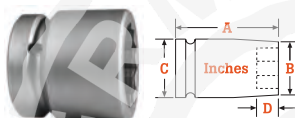
## 3/4" MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length		Largest Dia.	
				IN.	MM.	IN.	MM.
MF-75	3/4	3/4	7/32 Drill Hole	4	102	1 1/2	38
MF-75B	3/4	3/4	Ball	4	102	1 1/2	38
MF-76	3/4	3/4	7/32 Drill Hole	4 3/8	111	1 3/4	45
MF-76B	3/4	3/4	Ball	4 3/8	111	1 3/4	45

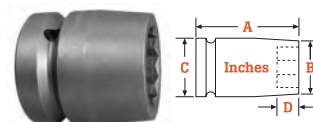
# 1" SQUARE DRIVE SOCKETS, SAE

## 6 POINT & DOUBLE HEX, STANDARD LENGTH



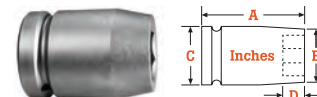
Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	8124-D	3/4	2 1/8	1 5/16	2	13/16
8126	-	13/16	2 1/8	1 3/8	2	13/16
-	8128-D	7/8	2 1/8	1 1/2	2	13/16
-	8130-D	15/16	2 1/8	1 1/2	2	13/16
-	8132-D	1	2 1/8	1 5/8	2	13/16
-	8134-D	1 1/16	2 1/8	1 11/16	2	13/16
-	8136-D	1 1/8	2 1/8	1 3/4	2	13/16
8138	8138-D	1 3/16	2 1/8	2 1/8	2	13/16
-	8140-D	1 1/4	2 1/8	2 1/8	2 1/8	13/16
8142	8142-D	1 5/16	2 1/8	2 1/8	2 1/8	13/16
-	8144-D	1 3/8	2 1/8	2 1/8	2 1/8	13/16
-	8146-D	1 7/16	2 1/4	2 1/4	2 1/8	15/16
8148	8148-D	1 1/2	2 1/4	2 1/4	2 1/8	15/16
-	8150-D	1 9/16	2 1/4	2 3/8	2 1/8	15/16
8152	-	1 5/8	2 3/8	2 1/2	2 1/8	15/16
8160	-	1 7/8	2 1/2	2 3/4	2 5/8	1 1/16
8162	8162-D	1 15/16	2 1/2	2 7/8	2 5/8	1 1/16
8170	-	2 3/16	2 3/4	3 1/4	3 1/4	1 5/16
8172	-	2 1/4	2 3/4	3 1/4	3 1/4	1 5/16
8174	-	2 5/16	2 3/4	3 3/8	3 1/4	1 3/8
8176	-	2 3/8	2 7/8	3 1/2	3 1/4	1 3/8
8180	-	2 1/2	2 7/8	3 3/4	3 1/4	1 3/8
8186	-	2 11/16	3	4	3 1/4	1 1/2
8188	-	2 3/4	3 1/8	4	3 1/4	1 5/8
8190	-	2 13/16	3 1/8	4	3 1/4	1 5/8

## 6 POINT & DOUBLE HEX, THIN WALL STANDARD LENGTH



Part No. 6 Point	Part No. Double Hex	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
-	8430-D	15/16	2 1/8	1 7/16	1 7/8	13/16
8432	8432-D	1	2 1/8	1 1/2	1 7/8	13/16
8434	-	1 1/16	2 1/8	1 9/16	1 7/8	13/16
8436	-	1 1/8	2 1/8	1 5/8	1 7/8	13/16
8440	8440-D	1 1/4	2 1/8	1 13/16	2	13/16
8442	8442-D	1 5/16	2 1/8	1 7/8	2	13/16
-	8444-D	1 3/8	2 1/8	1 15/16	2	13/16
8448	8448-D	1 1/2	2 1/4	2 1/8	2 1/8	15/16
8454	-	1 11/16	2 3/8	2 3/8	2 1/8	15/16
8456	-	1 3/4	2 3/8	2 7/16	2 1/8	1 1/16
8458	-	1 13/16	2 1/2	2 9/16	2 1/8	1 1/16
8460	-	1 7/8	2 1/2	2 5/8	2 5/8	1 1/16
8464	-	2	2 5/8	2 3/4	2 5/8	1 3/16
8472	-	2 1/4	2 3/4	3 1/8	2 5/8	1 5/16
8480	-	2 1/2	2 7/8	3 3/8	3 1/4	1 7/16

## 6 POINT, LONG LENGTH

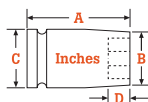


Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (A) IN.	Opening Depth (D) IN.
8228	7/8	3	1 7/16	2 1/8	9/16
8236	1 1/8	3	1 3/4	2 1/8	3/4
8240	1 1/4	3	2 1/8	2 1/8	13/16



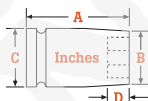
# 1" SQUARE DRIVE SOCKETS, SAE

## 6 POINT, EXTRA LONG LENGTH



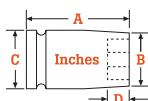
Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
8324	3/4	4 1/4	1 1/4	2 1/8	15/32
8326	13/16	4 1/4	1 3/8	2 1/8	17/32
8332	1	4 1/4	1 9/16	2 1/8	5/8
8336	1 1/8	4 1/4	1 3/4	2 1/8	3/4
8338	1 3/16	4 1/4	1 7/8	2 1/8	3/4
8340	1 1/4	4 1/4	2 1/8	2 1/8	13/16
8342	1 5/16	4 1/4	2 1/8	2 1/8	13/16
8346	1 7/16	4 1/4	2 1/4	2 1/8	15/16
8356	1-3/4	4 1/4	2 5/8	2 5/8	1 1/8
8360	1 7/8	4 1/4	2 3/4	2 5/8	1 1/4
8364	2	4 3/8	2 7/8	2 5/8	1 3/8
8370	2 3/16	4 1/2	3 1/8	2 5/8	1 1/2
8378	2 7/16	4 1/2	3 1/2	3 1/4	1 5/8
8380	2 1/2	4 1/2	3 1/2	3 1/4	1 5/8
8382	2 9/16	4 1/2	3 3/4	3 1/4	1 3/4
8384	2 5/8	4 1/2	3 3/4	3 1/4	1 3/4

## 6 POINT, THIN WALL, EXTRA LONG LENGTH



Part No. 6 Point	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
8530	15/16	4 1/4	1 1/2	2 1/8	5/8
8536	1 1/8	4 1/4	1 5/8	2 1/8	3/4
8540	1 1/4	4 1/4	1 13/16	2 1/8	13/16
8542	1 5/16	4 1/4	1 7/8	2 1/8	13/16

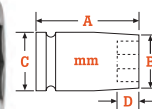
## SINGLE SQUARE & DOUBLE SQUARE, STANDARD LENGTH



Part Single Square	Part No. Double Square	Hex Opening IN.	Overall Length (A) IN.	Nose End Dia. (B) IN.	Drive End Dia. (C) IN.	Opening Depth (D) IN.
8624	-	3/4	2 1/8	1 5/8	2	13/16
8632	-	1	2 1/8	2 1/8	2 1/8	13/16
8634	-	1 1/16	2 1/8	2 1/8	2 1/8	13/16
8636	-	1 1/8	2 1/4	2 1/4	2 1/8	15/16
8638	8638-D	1 3/16	2 1/4	2 1/4	2 1/8	15/16
8640	8640-D	1 1/4	2 1/4	2 3/8	2 1/8	15/16
8644	-	1 3/8	2 5/16	2 5/8	2 5/8	1
-	8646-D	1 7/16	2 3/8	2 5/8	2 5/8	1
8648	-	1 1/2	2 3/8	2 3/4	2 5/8	1 1/16
-	8652-D	1 5/8	2 1/2	2 7/8	2 5/8	1 1/16

# 1" SQUARE DRIVE SOCKETS, METRIC

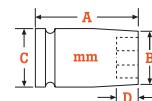
## 6 POINT, STANDARD LENGTH



Part No. 6 Point	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
21MM18	21	54	34.9	50.8	13.5
24MM18	24	54	38.1	50.8	20.6
27MM18	27	54	42.9	50.8	20.6
29mm18	29	54	47.6	50.8	20.6
30MM18	30	54	50.8	50.8	20.6
30MM48*	30	54	44.4	54.0	20.6
32MM18	32	54	54.0	54.0	20.6
34mm18	34	54	54.0	54.0	20.6
36MM18	36	57	57.1	54.0	23.9
41MM18	41	60	63.5	54.0	23.9
42MM18	42	60	63.5	54.0	23.9
46MM18	46	64	69.8	66.7	26.9
50MM18	50	66	76.2	66.7	30.2

\*Thin wall

## 6 POINT, LONG LENGTH



Part No. 6 Point	Hex Opening MM.	Overall Length (A) MM.	Nose End Dia. (B) MM.	Drive End Dia. (C) MM.	Opening Depth (D) MM.
24MM38	24	108	38.1	54.0	15.9
SF-24MM38	24	108	38.1	54.0	15.9
27MM38	27	108	41.3	54.0	17.5
28MM38	28	108	44.4	54.0	19.1
33MM38	33	108	54.0	54.0	20.6
36MM38	36	108	54.0	54.0	23.8
37MM38	37	108	57.1	54.0	23.8
46MM38	46	108	69.8	66.7	31.8
50MM38	50	111	73.0	66.7	34.9

## 1" SQ. DR. EXTENSIONS

2 13/16" TO 15"  
LENGTH



Part Number	Male Square IN.	Type of Lock	Overall Length	
			IN.	MM.
EX-1001	1	9/32 Drill Hole	2 13/16	71
EX-1001-B	1	Ball	2 13/16	71
EX-1003-4	1	9/32 Drill Hole	4	102
EX-1003-B-4	1	Ball	4	102
EX-1003-6	1	9/32 Drill Hole	6	152
EX-1003-B-6	1	Ball	6	152
EX-1003-8	1	9/32 Drill Hole	8	203
EX-1003-B-8	1	Ball	8	203
EX-1003-10	1	9/32 Drill Hole	10	254
EX-1003-B-10	1	Ball	10	254
EX-1003-12	1	9/32 Drill Hole	12	305
EX-1003-B-12	1	Ball	12	305
EX-1003-15	1	9/32 Drill Hole	15	381
EX-1003-B-15	1	Ball	15	381

## 1" SQ. DR. ADAPTERS

3/4" TO 1 1/2"  
MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length	
				IN.	MM.
EX-754	1	3/4	7/32 Drill Hole	2 13/16	71
EX-754-B	1	3/4	Ball	2 13/16	71
EX-756-4	1	3/4	7/32 Drill Hole	4	102
EX-756-6	1	3/4	7/32 Drill Hole	6	152
EX-756-8	1	3/4	7/32 Drill Hole	8	203
EX-756-B-8	1	3/4	Ball	8	203
EX-1101	1	1 1/2	3/8 Drill Hole	3 9/16	91

## 1" SQ. DR. UNIVERSAL ADAPTERS

3/4" TO 1"  
MALE SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length		Largest Dia.	
				IN.	MM.	IN.	MM.
MF-77-B	1	3/4	Ball	4 3/4	121	2	51
MF-82-B	1	1	Ball	5	127	2	51

## 1 1/2" SQ. DR. SOCKETS, SAE

6 POINT,  
STANDARD LENGTH



Part No. 6 Point	Hex Opening IN.	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.	Opening Depth MM.
9172	2 1/4	3 1/4	3 3/8	3 1/4	1 1/2

## 1 1/2" SQ. DR. ADAPTERS

1" MALE  
SQUARE



Part Number	Female Square IN.	Male Square IN.	Type of Lock	Overall Length	
				IN.	MM.
EX-1005	1 1/2	1	9/32 Drill Hole	3 15/16	100
EX-1005-B	1 1/2	1	Ball	3 15/16	100



## APEX U-GUARD PREMIUM SAFETY AND ANTI-MAR COVERED TOOLS

// FREE-SPINNING, MOLDED  
u-GUARD COVERED TOOLS  
INCREASE OPERATOR SAFETY  
BY SIGNIFICANTLY REDUCING OR  
ELIMINATING PINCH POINTS. OUR  
CUSTOMERS GET THE PROVEN  
APEX PERFORMANCE PLUS THE  
BEST PROTECTION AVAILABLE  
AGAINST IN-SYSTEM DAMAGE.

## THE GLOBAL LEADER IN ENHANCING OPERATOR SAFETY ON THE ASSEMBLY LINE

APEX u-GUARD™ free-spinning covered drive tools increase operator safety by significantly reducing or eliminating pinch points when operators are wearing gloves.

APEX u-GUARD provides a protective barrier between genuine APEX fastener tools and your finely finished workpiece, thereby delivering the proven APEX performance plus the best protection available against in-system damage. The free-spinning design provides maximum protection for polished and highly sensitive surfaces.

APEX has solutions for all aspects of safety on an assembly line when it comes to fastener drive tools. In addition to our line of Covered Bits, Bit Holders, Sockets, Extensions, and Universal Wrenches, we also offer u-GUARD Gap Covers that will eliminate the gap between a socket and an extension or between the right-angle power tool and a socket / extension.

**THE APEX u-GUARD LINE OF  
COVERED DRIVE TOOLS HAS  
EVOLVED INTO THE TOOL  
OF CHOICE FOR ENHANCING  
OPERATOR SAFETY IN ALMOST  
ALL LEADING ASSEMBLY PLANTS.**

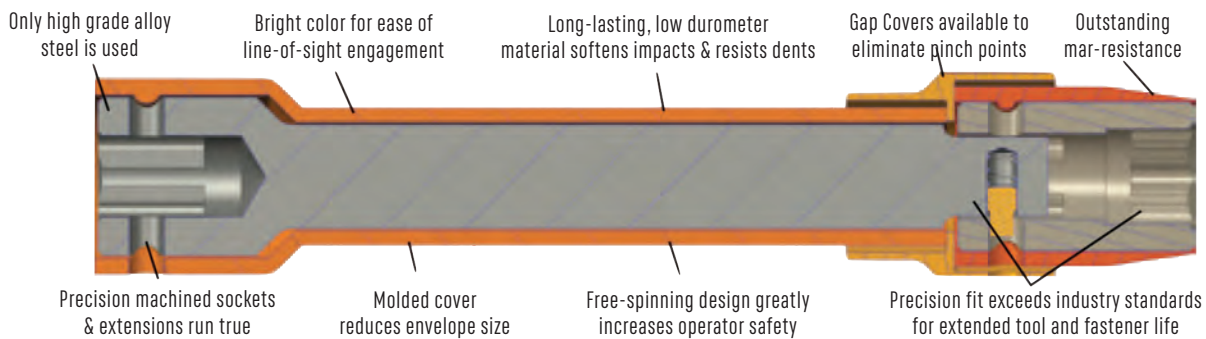


*APEX u-GUARD gap cover enhances safety by covering the gap between a socket and an extension*

## APEX u-GUARD ADVANTAGE

- INCREASED OPERATOR SAFETY
- REDUCED IN-SYSTEM DAMAGE AND MARRING
- ENHANCED PLANT PRODUCTIVITY
- FREE-SPINNING DESIGN FOR IMPROVED ERGONOMICS AND SAFETY
- SUPERIOR DURABILITY LEADING TO SIGNIFICANTLY LOWER COST OF OWNERSHIP





## APEX u-GUARD UGS MOLDED COVERED TOOLS

Over the past decade, the APEX u-GUARD UGS Series of molded covered tools have been rapidly adopted by leading aerospace, appliance, automotive and heavy equipment assembly plants around the world. These tools allow the drive tool to spin freely inside of the covers, significantly reducing or eliminating contact from the rotating tool during a fastening operation. In addition to improving operator safety, these tools help minimize in-system damage and marring caused during fastening.



## APEX u-GUARD UGH MACHINED COVERED TOOLS

The APEX u-GUARD UGH Series of high durometer covered tools are machined for tight tolerances. Made from a high performance engineered thermoplastic material, these free-spinning covered tools offer a thin protective cover for tight clearance applications. u-GUARD UGH tools can be configured to suit a unique customer application where a standard u-GUARD UGS tool may not be available.

## THE COVER STORY: u-GUARD UGS

- **LOW DUROMETER, THERMOPLASTIC URETHANE (TPU ELASTOMER) MATERIAL THAT RESISTS DENTS DURING INCIDENTAL SIDE IMPACTS.**
- **ABSORBS SIDE IMPACTS AND DOES NOT PRODUCE RAISED BURRS WHEN IMPACTED.**
- **MOLDED TO THE TOOL FOR REDUCED ENVELOPE DIMENSIONS YET STILL ABLE TO EXHIBIT "FREE-SPINNING" CAPABILITY FOR IMPROVED OPERATOR SAFETY AND ERGONOMICS.**
- **COVER IS NON-REMOVABLE TO PREVENT UNWANTED TAMPERING ON THE LINE.**
- **LOW SUSTAINED COEFFICIENT OF FRICTION BETWEEN THE COVER AND THE TOOL PRODUCES MINIMAL LOSS OF TOOL EFFICIENCY.**
- **SIGNATURE ORANGE COLOR MAKES FASTENER CONTACT EASIER AND STATION MONITORING SMOOTHER.**
- **PART NUMBERS ARE CLEARLY MARKED FOR EASE OF IDENTIFICATION.**

**ONLY APEX HAS THE ENGINEERING CAPABILITY, MANUFACTURING PROWESS, AND SUPPLY NETWORK TO MEET THE GLOBAL REQUIREMENTS OF TODAY'S MARKET PLACE.**



## SELECT CASE STUDIES

### BODY ASSEMBLY

**Problem:** Customer expressed safety concerns due to snagging of operators' gloves while guiding a Tap.

**APEX Solution:** Developed a covered tap holder that includes a spring-loaded non-marring sleeve which covers all of the Tap except the tip.

**Benefit to Customer:**

- Increased operator safety since the cover prevents gloves from getting trapped
- Improved plant productivity due to significant reduction in safety incidents



### INTERIOR COMPONENT ASSEMBLY

**Problem:** Customer needed a quick release chuck with a free spinning cover to improve operator safety and reduce marring.

**APEX Solution:** Developed a free-spinning, covered driver that allows the user to activate the quick-release feature

**Benefit to Customer:**

- Customer can change-out power drive bits quickly
- Anti-mar cover replaces typical knurled surface without compromising functionality
- Free-spinning design significantly improves operator safety



### FINAL ASSEMBLY - VARIOUS APPLICATIONS

**Problem:** A standard Universal Wrench with a 30 degree angle failed to deliver the required torque. Customer also required a covered tool for reduced marring.

**APEX Solution:** Developed a covered Universal Wrench that provides a 20 degree angle

**Benefit to Customer:**

- Custom tool is providing the required torque
- Socket & shank are covered with a free-spinning orange cover enhancing safety and anti-mar protection



# APEX u-GUARD SOCKET GAP COVERS

## LEAVING NO SAFETY GAP ON THE ASSEMBLY LINE



**APEX u-GUARD socket gap covers** have been developed to further enhance plant and operator safety by helping minimize fastening tool related injuries on the assembly line. Starting with engineered thermoplastic material that combines low friction and wear resistance with high impact resistance to ensure a long lasting, high quality part, APEX u-GUARD socket gap covers are then machined for a form fitting profile which flows from the extension to the socket keeping the outer envelope size to a minimum while providing for maximum clearance in most applications.

### APEX SOCKET/EXTENSION GAP COVERS

Drive Size	Part Number	Min. Internal Cover Dia. (Inch) (Socket Side)
1/4"	GC-A-0688	0.714
1/4"	GC-A-0750	0.776
1/4"	GC-A-0812	0.840
3/8"	GC-C-0812	0.832
3/8"	GC-C-0938	0.970
3/8"	GC-C-1000	1.028
3/8"	GC-C-1063	1.084
3/8"	GC-C-1125	1.146
3/8"	GC-C-1250	1.270
1/2"	GC-E-1125	1.150
1/2"	GC-E-1188	1.208
1/2"	GC-E-1250	1.270
1/2"	GC-E-1375	1.395
1/2"	GC-E-1438	1.458



Gap Cover showing connection between the extension and socket.



Tool with Gap Cover connection

# THE GLOBAL LEADER IN PROMOTING SAFETY AND ANTI-MAR DRIVE TOOLS

## WHY APEX u-GUARD SOCKET GAP COVERS?

Operator safety when performing fastening operations is becoming a growing concern in assembly plants such as large automotive plants. Manufacturing facilities have concerns about operators' gloves or hair potentially getting stuck in the gap between the socket and extension. Such risk can now be significantly reduced by using APEX u-GUARD Socket Gap Covers.



### FEATURES AND BENEFITS:

- Increased operator safety by removing the pinch point between the covered sockets and extensions
- Improve productivity by reducing lost time to injuries and recordable incidents
- Superior durability - generally outlast the free-spinning tools that they are covering
- Easy to install via a pin-lock mechanism
- Robust, free-spinning design
- Versatile - one gap cover can be used for multiple socket/extension combinations

## NEW! APEX RIGHT-ANGLE NUTRUNNER GAP COVERS



APEX has developed covers to bridge the gap between the right-angle power tool and the socket (or extension) for most right angle nutrunner. APEX is currently offering Right-Angle Nutrunner Gap Covers as a custom solution. To obtain a quick quote, please contact us with the options below:

(it's required to have the right angle nutsetter brand and model number to receive a sales quote)

# UGS SERIES SOCKETS

## 1/4" SQUARE DRIVE SOCKETS, SAE, NON-MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN. MM.	
UG-1104	1/8	Hex	0.91	23.1
UG-1105	5/32	Hex	0.91	23.1
UG-1107	7/32	Hex	0.91	23.1
UG-1107-D	7/32	Double Hex	0.91	23.1
UG-1E08	1/4	Hex	0.88	22.4
UG-1108	1/4	Hex	0.91	23.1
UG-1108-D	1/4	Double Hex	0.91	23.1
UG-FL-1108	1/4	Hex	0.91	23.1
UG-X-1108	1/4	Hex	0.91	23.1
UG-1608	1/4	Square	1.03	26.2
UG-1608-D	1/4	Double Sq.	1.03	26.2
UG-1208	1/4	Hex	1.8	45.7
UG-1P09	9/32	Hex	0.91	23.1
UG-1609-D	9/32	Double Sq.	1.03	26.2
UG-1209	9/32	Hex	1.78	45.2
UG-1110	5/16	Hex	1.03	26.2
UG-1110-D	5/16	Double Hex	1.03	26.2
UG-1610	5/16	Square	1.03	26.2
UG-1610-D	5/16	Double Sq.	1.03	26.2
UG-FL-1110	5/16	Hex	1.03	26.2
UG-1210-D	5/16	Double Hex	1.75	44.5
UG-1210	5/16	Hex	1.78	45.2
UG-FL-1210	5/16	Hex	1.78	45.2
UG-X-1110	5/16	Hex	3.53	89.7
UG-2A-110	5/16	Hex	3.53	89.7
UG-1111	11/32	Hex	1.03	26.2
UG-1111-D	11/32	Double Hex	1.03	26.2
UG-1P11	11/32	Hex	1.03	26.2
UG-1211	11/32	Hex	1.78	45.2
UG-FL-1211	11/32	Hex	1.78	45.2
UG-1112	3/8	Hex	1.03	26.2
UG-1112-D	3/8	Double Hex	1.03	26.2
UG-1P12	3/8	Hex	1.03	26.2
UG-FL-1112	3/8	Hex	1.03	26.2
UG-SF-1112	3/8	Hex	1.03	26.2
UG-1212	3/8	Hex	1.78	45.2
UG-1212-D	3/8	Double Hex	1.78	45.2
UG-FL-1212	3/8	Hex	1.78	45.2
UG-SF-1212	3/8	Hex	1.78	45.2
UG-1113	13/32	Hex	1.03	26.2
UG-1213	13/32	Hex	1.78	45.2
UG-1114	7/16	Hex	1.03	26.2
UG-1114-D	7/16	Double Hex	1.03	26.2
UG-FL-1114	7/16	Hex	1.03	26.2
UG-SF-1114	7/16	Hex	1.03	26.2
UG-FL-1214	7/16	Hex	1.78	45.2
UG-1116	1/2	Hex	1.03	26.2
UG-1116-D	1/2	Double Hex	1.03	26.2
UG-1P16	1/2	Hex	1.03	26.2
UG-FL-1116	1/2	Hex	1.03	26.2
UG-SF-1116	1/2	Hex	1.03	26.2
UG-1120	5/8	Hex	1.03	26.2
UG-TXA-908	E8	Torx	3.53	89.7
UG-TX-1110	E10	Torx	1.03	26.2

## 1/4" SQUARE DRIVE SOCKETS, SAE, MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN. MM.	
UG-M-1105	5/32	Hex	0.91	23.1
UG-M-1107	7/32	Hex	0.91	23.1
UG-M1E07	7/32	Hex	0.91	23.1
UG-M1E08	1/4	Hex	0.88	22.4
UG-M-1108-E	1/4	Hex	0.91	23.1
UG-M1E08-LN	1/4	Hex	0.91	23.1
UG-M1P08-LN	1/4	Hex	0.91	23.1
UG-MX-1108	1/4	Hex	0.91	23.1
UG-MX-1108-E	1/4	Hex	0.91	23.1
UG-SM-1108	1/4	Hex	0.91	23.1
UG-MB-1208	1/4	Hex	1.80	45.7
UG-M1P09	9/32	Hex	0.91	23.1
UG-MB-1209	9/32	Hex	1.78	45.2
UG-M-1110	5/16	Hex	1.03	26.2
UG-MX-1110	5/16	Hex	1.03	26.2
UG-M-1210	5/16	Hex	1.78	45.2
UG-MB-1210	5/16	Hex	1.78	45.2
UG-SM-1210	5/16	Hex	1.78	45.2
UG-MB-1210-D	5/16	Double Hex	1.78	45.2
UG-MZA-110	5/16	Hex	3.53	89.7
UG-M-1111	11/32	Hex	1.03	26.2
UG-M1E11	11/32	Hex	1.03	26.2
UG-M1P11	11/32	Hex	1.03	26.2
UG-MX-1111	11/32	Hex	1.03	26.2
UG-MB-1211	11/32	Hex	1.78	45.2
UG-SM-1211	11/32	Hex	1.78	45.2
UG-SM-1212	11/32	Hex	1.78	45.2
UG-MB-1212-D	11/32	Double Hex	1.78	45.2
UG-M-1112	3/8	Hex	1.03	26.2
UG-M1E12	3/8	Hex	1.03	26.2
UG-M1P12	3/8	Hex	1.03	26.2
UG-MX-1112	3/8	Hex	1.03	26.2
UG-MB-1212	3/8	Hex	1.78	45.2
UG-M-1114	7/16	Hex	1.03	26.2
UG-MX-1114	7/16	Hex	1.03	26.2
UG-SM-1114	7/16	Hex	1.03	26.2
UG-M-1114-D	7/16	Double Hex	1.03	26.2
UG-MB-1214	7/16	Hex	1.78	45.2
UG-M-1116	1/2	Hex	1.03	26.2
UG-M1E16	1/2	Hex	1.03	26.2
UG-M1P16	1/2	Hex	1.03	26.2
UG-MTX-5114	E14	Torx	1.50	38.1

Note:

SF: Surface drive hex | FL: Fast lead hex

## 1/4" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN. MM.	
UG-4MM11	4	Hex	0.91	23.1
UG-4MME1	4	Hex	0.91	23.1
UG-5MME1	5	Hex	0.91	23.1
UG-5MM11	5	Hex	0.91	23.1
UG-5.5MME1	5.5	Hex	0.91	23.1
UG-5.5MM11	5.5	Hex	0.91	23.1
UG-6MM11	6	Hex	0.91	23.1
UG-6MM11-D	6	Double Hex	0.91	23.1
UG-6MME1	6	Hex	0.91	23.1
UG-7MM11	7	Hex	0.91	23.1
UG-7MM11-D	7	Double Hex	0.91	23.1
UG-7MME1	7	Hex	0.91	23.1
UG-SF-7MM11	7	Hex	0.91	23.1
UG-7MM21	7	Hex	1.78	45.2
UG-SF-7MM21	7	Hex	1.78	45.2
UG-8MM11	8	Hex	1.03	26.2
UG-8MME1	8	Hex	1.03	26.2
UG-SF-8MM11	8	Hex	1.03	26.2
UG-8MM11-D	8	Double Hex	1.03	26.2
UG-FL-8MM11	8	Hex	1.03	26.2
UG-8MM21	8	Hex	1.78	45.2
UG-8MM21-D	8	Double Hex	1.78	45.2
UG-FL-8MM21	8	Hex	1.78	45.2
UG-SF-8MM21	8	Hex	1.78	45.2
UG-9MM11	9	Hex	1.03	26.2
UG-9MM11-D	9	Double Hex	1.03	26.2
UG-SF-9MM11	9	Hex	1.03	26.2
UG-9MM21	9	Hex	1.78	45.2
UG-9MM21-D	9	Double Hex	1.78	45.2
UG-10MM11	10	Hex	1.03	26.2
UG-10MM11-D	10	Double Hex	1.03	26.2
UG-10MME1	10	Hex	1.03	26.2
UG-OS-10MM11	10	Hex	1.03	26.2
UG-OS-10MM11-D	10	Double Hex	1.03	26.2
UG-SF-10MM11	10	Hex	1.03	26.2
UG-10MM21	10	Hex	1.78	45.2
UG-10MM21-D	10	Double Hex	1.78	45.2
UG-FL-10MM21	10	Hex	1.78	45.2
UG-SF-10MM21	10	Hex	1.78	45.2
UG-11MM11	11	Hex	1.03	26.2
UG-11MM11-D	11	Double Hex	1.03	26.2
UG-SF-11MM11	11	Hex	1.03	26.2
UG-11MM21	11	Hex	1.78	45.2
UG-12MM11	12	Hex	1.03	26.2
UG-SF-12MM11	12	Hex	1.03	26.2
UG-13MM11	13	Hex	1.03	26.2
UG-13MM11-D	13	Double Hex	1.03	26.2
UG-13MME1	13	Hex	1.03	26.2
UG-SF-13MM11	13	Hex	1.53	38.9
UG-15MM11	15	Hex	1.03	26.2
UG-16MM11	16	Hex	1.03	26.2

# UGS SERIES SOCKETS

## 1/4" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	MM.
UG-M-5MM11	5	Hex	0.91	23.1
UG-M-5MME1	5	Hex	0.91	23.1
UG-M-5.5MM11	5.5	Hex	0.91	23.1
UG-M-5.5MME1	5.5	Hex	0.91	23.1
UG-M-6MM11	6	Hex	0.91	23.1
UG-M-6MME1	6	Hex	0.91	23.1
UG-MVA-104-7MM	7	Hex	0.88	22.4
UG-M-7MM11	7	Hex	0.91	23.1
UG-M-7MME1	7	Hex	0.91	23.1
UG-MR-7MME1	7	Hex	0.91	23.1
UG-M-7MM21	7	Hex	1.78	45.2
UG-MB-7MM21	7	Hex	1.78	45.2
UG-SM-7MM21	7	Hex	1.78	45.2
UG-M-8MME1	8	Hex	1.03	26.2
UG-M-8MM11	8	Hex	1.03	26.2
UG-M-8MM11-D	8	Double Hex	1.03	26.2
UG-M-8MM21	8	Hex	1.78	45.2
UG-MB-8MM21	8	Hex	1.78	45.2
UG-SM-8MM21	8	Hex	1.78	45.2
UG-M-9MME1	9	Hex	1.03	26.2
UG-M-9MM11	9	Hex	1.03	26.2
UG-M-9MM21	9	Hex	1.78	45.2
UG-MB-9MM21	9	Hex	1.78	45.2
UG-SM-9MM21	9	Hex	1.78	45.2
UG-M-10MM11	10	Hex	1.03	26.2
UG-M-10MME1	10	Hex	1.03	26.2
UG-MSF-10MM11	10	Hex	1.03	26.2
UG-MSWM-10MME1	10	Hex	1.03	26.2
UG-OSM-10MM11	10	Hex	1.03	26.2
UG-MB-10MM21	10	Hex	1.78	45.2
UG-M-10MM21	10	Hex	1.78	45.2
UG-MB-SF-10MM21	10	Hex	1.78	45.2
UG-MSF-10MM21	10	Hex	1.78	45.2
UG-OSMB-10MM21	10	Hex	1.78	45.2
UG-SM-10MM21	10	Hex	1.78	45.2
UG-M-11MM11	11	Hex	1.03	26.2
UG-M-11MM21	11	Hex	1.78	45.2
UG-MB-11MM21	11	Hex	1.78	45.2
UG-SM-11MM21	11	Hex	1.78	45.2
UG-M-12MM11	12	Hex	1.03	26.2
UG-M-13MM11	13	Hex	1.03	26.2
UG-M-13MME1	13	Hex	1.03	26.2
UG-M-15MM11	15	Hex	1.03	26.2

## 3/8" SQUARE DRIVE SOCKETS, SAE, NON-MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	MM.
UG-3108	1/4	Hex	1.28	32.5
UG-3108-D	1/4	Double Hex	1.28	32.5
UG-3109	9/32	Hex	1.28	32.5
UG-3110	5/16	Hex	1.25	31.8
UG-3110-D	5/16	Double Hex	1.28	32.5
UG-3210-D	5/16	Double Hex	2.03	51.6
UG-SF-3210	5/16	Hex	2.03	51.6
UG-3210	5/16	Hex	2.04	51.8
UG-3111	11/32	Hex	1.28	32.5
UG-3211	11/32	Hex	2.03	51.6
UG-3211-D	11/32	Double Hex	2.03	51.6
UG-3P12	3/8	Hex	1.28	32.5
UG-3112	3/8	Hex	1.28	32.5
UG-3412	3/8	Hex	1.53	38.9
UG-3412-D	3/8	Double Hex	1.53	38.9
UG-3612-D	3/8	Double Sq.	1.53	38.9
UG-FL-3412	3/8	Hex	1.53	38.9
UG-SF-3412	3/8	Hex	1.53	38.9
UG-3612	3/8	Square	1.54	39.1
UG-3212	3/8	Hex	2.03	51.6
UG-3212-D	3/8	Double Hex	2.03	51.6
UG-3614	7/16	Square	1.53	38.9
UG-3614-D	7/16	Double Sq.	1.53	38.9
UG-3214	7/16	Hex	2.03	51.6
UG-SF-3214	7/16	Hex	2.03	51.6
UG-3016	1/2	Hex	0.91	23.1
UG-3016-D	1/2	Double Hex	0.91	23.1
UG-FL-3016	1/2	Hex	0.91	23.1
UG-SF-3016	1/2	Hex	0.91	23.1
UG-3416	1/2	Hex	1.53	38.9
UG-3416-D	1/2	Double Hex	1.53	38.9
UG-3616	1/2	Square	1.53	38.9
UG-3616-D	1/2	Double Sq.	1.53	38.9
UG-3P16	1/2	Hex	1.53	38.9
UG-FL-3116	1/2	Hex	1.53	38.9
UG-3116	1/2	Hex	1.53	38.9
UG-SF-3116	1/2	Hex	1.53	38.9
UG-SF-3416	1/2	Hex	1.53	38.9
UG-SF-3216	1/2	Hex	2.03	51.6
UG-3216	1/2	Hex	2.03	51.6
UG-3216-D	1/2	Double Hex	2.03	51.6
UG-3516	1/2	Hex	2.03	51.6
UG-3516-D	1/2	Double Hex	2.03	51.6
UG-FL-3216	1/2	Hex	2.03	51.6
UG-SF-3516	1/2	Hex	2.03	51.6
UG-3117	17/32	Hex	1.53	38.9
UG-3118	9/16	Hex	1.53	38.9
UG-3118-D	9/16	Double Hex	1.53	38.9

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	MM.
UG-3418	9/16	Hex	1.53	38.9
UG-3418-D	9/16	Double Hex	1.53	38.9
UG-3618	9/16	Square	1.53	38.9
UG-3618-D	9/16	Double Sq.	1.53	38.9
UG-FL-3118	9/16	Hex	1.53	38.9
UG-SF-3118	9/16	Hex	1.53	38.9
UG-SF-3418	9/16	Hex	1.53	38.9
UG-SW-343	9/16	Hex	1.53	38.9
UG-3218	9/16	Hex	2.03	51.6
UG-3218-D	9/16	Double Hex	2.03	51.6
UG-FL-3218	9/16	Hex	2.03	51.6
UG-SF-3218	9/16	Hex	2.03	51.6
UG-3318	9/16	Hex	3.53	89.7
UG-3318-D	9/16	Double Hex	3.53	89.7
UG-3119	19/32	Hex	1.53	38.9
UG-3020	5/8	Hex	1.03	26.2
UG-3020-D	5/8	Double Hex	1.03	26.2
UG-3420-D	5/8	Double Hex	1.53	38.9
UG-3620	5/8	Square	1.53	38.9
UG-FL-3122	11/16	Hex	1.53	38.9
UG-SF-3122	11/16	Hex	1.53	38.9
UG-3222	11/16	Hex	2.03	51.6
UG-3222-D	11/16	Double Hex	2.03	51.6
UG-3424	3/4	Hex	1.53	38.9
UG-3424-D	3/4	Double Hex	1.53	38.9
UG-SF-3124	3/4	Hex	1.53	38.9
UG-3524	3/4	Hex	2.03	51.6
UG-3524-D	3/4	Double Hex	2.03	51.6
UG-3426	13/16	Hex	1.53	38.9
UG-TX-3108	E8	Torx	1.29	32.8
UG-10EP13	10EP	Torx Plus	1.28	32.5
UG-TX-3110	E10	Torx	1.28	32.5
UG-TX-3114	E14	Torx	1.28	32.5



# UGS SERIES SOCKETS

## 3/8" SQUARE DRIVE SOCKETS, SAE, MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-MB-3210	5/16	Hex	2.04	51.8
UG-MB-3211	11/32	Hex	2.03	51.6
UG-M-3P12	3/8	Hex	1.28	32.5
UG-M-3412	3/8	Hex	1.53	38.9
UG-M-3614-D	7/16	Double Sq.	1.53	38.9
UG-M-3016	1/2	Hex	0.91	23.1
UG-M-3P16	1/2	Hex	1.53	38.9
UG-M-3116	1/2	Hex	1.53	38.9
UG-M-3416-D	1/2	Double Hex	1.53	38.9
UG-M-3416-E	1/2	Hex	1.53	38.9
UG-M3E16	1/2	Hex	1.53	38.9
UG-MB-3216	1/2	Hex	2.03	51.6
UG-SM-3216	1/2	Hex	2.03	51.6
UG-M-3216	1/2	Hex	2.03	51.6
UG-MB-3516	1/2	Hex	2.03	51.6
UG-M-3118	9/16	Hex	1.53	38.9
UG-M-3418-D	9/16	Double Hex	1.53	38.9
UG-M-3218	9/16	Hex	2.03	51.6
UG-MB-3218	9/16	Hex	2.03	51.6
UG-SM-3218	9/16	Hex	2.03	51.6
UG-M-3318	9/16	Hex	3.53	89.7
UG-MB-3318	9/16	Hex	3.53	89.7
UG-M-3124	3/4	Hex	1.53	38.9
UG-M-3424	3/4	Hex	1.53	38.9
UG-M-3426	13/16	Hex	1.53	38.9
UG-MTX-3108	E8	Torx	1.28	32.5
UG-MTX-3110	E10	Torx	1.28	32.5
UG-MTX-3114	E14	Torx	1.25	31.8

## 3/8" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-7MM13	7	Hex	1.28	32.5
UG-FL-7MM13	7	Hex	1.28	32.5
UG-SF-7MM13	7	Hex	1.28	32.5
UG-FL-7MM23	7	Hex	2.03	51.6
UG-7MM23	7	Hex	2.03	51.6
UG-SF-7MM23	7	Hex	2.03	32.5
UG-SF-8MM13	8	Hex	1.28	32.5
UG-8MM13	8	Hex	1.28	32.5
UG-8MM13-D	8	Double Hex	1.28	32.5
UG-8MME3	8	Hex	1.28	32.5
UG-FL-8MM13	8	Hex	1.28	32.5
UG-8MM23	8	Hex	2.03	51.6
UG-FL-8MM23	8	Hex	2.03	51.6
UG-SF-8MM23	8	Hex	2.03	51.6
UG-9MM23	9	Hex	2.03	51.6
UG-SF-9MM23	9	Hex	2.03	51.6
UG-10MM03	10	Hex	0.9	22.7
UG-SF-10MM03	10	Hex	0.9	22.7
UG-FL-10MM03	10	Hex	0.91	23.1
UG-10MM13	10	Hex	1.28	32.5
UG-10MM13-D	10	Double Hex	1.28	32.5
UG-SF-10MM43	10	Hex	1.28	32.5
UG-10MM43	10	Hex	1.28	32.5
UG-10MM43-D	10	Double Hex	1.28	32.5
UG-FL-10MM43	10	Hex	1.28	32.5
UG-FL-10MM43-E	10	Hex	1.28	32.5
UG-SF-10MM13	10	Hex	1.28	32.5
UG-10MM63	10	Square	1.53	38.9
UG-10MM63-D	10	Double Sq.	1.53	38.9
UG-10MM23	10	Hex	2.03	51.6
UG-OS-10MM23	10	Hex	2.03	51.6
UG-10MM23-D	10	Double Hex	2.03	51.6
UG-CSF-10MM23	10	Hex	2.03	51.6
UG-FL-10MM23	10	Hex	2.03	51.6
UG-FL-10MM23-E	10	Hex	2.03	51.6
UG-SF-10MM23	10	Hex	2.03	51.6
UG-10MM33	10	Hex	3.53	89.7
UG-CSF-10MM33	10	Hex	3.53	89.7
UG-FL-10MM33	10	Hex	3.53	89.7
UG-SF-10MM33	10	Hex	3.53	89.7
UG-11MM13	11	Hex	1.28	32.5
UG-SF-11MM13	11	Hex	1.28	32.5
UG-FL-11MM13	11	Hex	1.28	32.5
UG-11MM23	11	Hex	2.03	51.6
UG-11MM23-D	11	Double Hex	2.03	51.6
UG-SF-11MM23	11	Hex	2.03	51.6
UG-12MM03	12	Hex	0.91	23.1
UG-SF-12MM03	12	Hex	0.91	23.1

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-12MM03-D	12	Double Hex	0.91	23.1
UG-FL-12MM03	12	Hex	0.91	23.1
UG-12MM13	12	Hex	1.53	38.9
UG-12MM13-D	12	Double Hex	1.53	38.9
UG-FL-12MM13	12	Hex	1.53	38.9
UG-SF-12MM13	12	Hex	1.53	38.9
UG-12MM23	12	Hex	2.03	51.6
UG-12MM23-D	12	Double Hex	2.03	51.6
UG-SF-12MM23	12	Hex	2.03	51.6
UG-SF-12MM53	12	Hex	2.03	51.6
UG-13MM03	13	Hex	0.91	23.1
UG-SF-13MM03	13	Hex	0.91	23.1
UG-13MM03-D	13	Double Hex	0.91	23.1
UG-FL-13MM03	13	Hex	0.91	23.1
UG-13MM13	13	Hex	1.53	38.9
UG-13MME3	13	Hex	1.53	38.9
UG-13MM13-D	13	Double Hex	1.53	38.9
UG-13MM43	13	Hex	1.53	38.9
UG-13MM43-D	13	Double Hex	1.53	38.9
UG-CSF-13MM43	13	Hex	1.53	38.9
UG-FL-13MM13	13	Hex	1.53	38.9
UG-SF-13MM13	13	Hex	1.53	38.9
UG-SF-13MM43	13	Hex	1.53	38.9
UG-CSF-13MM23	13	Hex	2.03	51.6
UG-VC-68-13MM	13	Hex	2.03	51.6
UG-13MM23	13	Hex	2.03	51.6
UG-SF-13MM23	13	Hex	2.03	51.6
UG-13MM23-D	13	Double Hex	2.03	51.6
UG-SF-13MM53	13	Hex	2.03	51.6
UG-FL-13MM23	13	Hex	2.03	51.6
UG-13MM33	13	Hex	3.53	89.7
UG-CSF-13MM33	13	Hex	3.53	89.7
UG-SF-13MM33	13	Hex	3.53	89.7
UG-14MM13	14	Hex	1.53	38.9
UG-14MM13-D	14	Double Hex	1.53	38.9
UG-14MM43	14	Hex	1.53	38.9
UG-SF-14MM13	14	Hex	1.53	38.9
UG-14MM23	14	Hex	2.03	51.6
UG-14MM23-D	14	Double Hex	2.03	51.6
UG-SF-14MM23	14	Hex	2.03	51.6
UG-14MM33	14	Hex	3.53	89.7
UG-15MM03	15	Hex	0.97	24.7
UG-15MM03-D	15	Double Hex	0.97	24.7
UG-FL-15MM03	15	Hex	0.97	24.7
UG-SF-15MM03	15	Hex	0.97	24.7
UG-15MM13	15	Hex	1.53	38.9
UG-15MM13-D	15	Double Hex	1.53	38.9

Note:

CSF: Surface hex with extra large counter-sink.

# UGS SERIES SOCKETS

## 3/8" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC (CONTINUED)

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN. MM.	
UG-15MM43	15	Hex	1.53	38.9
UG-15MM43-D	15	Double Hex	1.53	38.9
UG-CSF-15MM43	15	Hex	1.53	38.9
UG-SF-15MM13	15	Hex	1.53	38.9
UG-SF-15MM43	15	Hex	1.53	38.9
UG-15MM23	15	Hex	2.03	51.6
UG-15MM23-D	15	Double Hex	2.03	51.6
UG-CSF-15MM23	15	Hex	2.03	51.6
UG-SF-15MM33	15	Hex	2.03	51.6
UG-15MM33	15	Hex	3.53	89.7
UG-15MM33-D	15	Double Hex	3.53	89.7
UG-CSF-15MM33	15	Hex	3.53	89.7
UG-16MM03-D	16	Double Hex	1.03	26.2
UG-SF-16MM03	16	Hex	1.03	26.2
UG-16MM43	16	Hex	1.53	38.9
UG-16MM43-D	16	Double Hex	1.53	38.9
UG-17MM13	17	Hex	1.53	38.9
UG-17MM13-D	17	Double Hex	1.53	38.9
UG-SF-17MM13	17	Hex	1.53	38.9
UG-17MM23	17	Hex	2.03	51.6
UG-17MM23-D	17	Double Hex	2.03	51.6
UG-SF-17MM23	17	Hex	2.03	51.6
UG-18MM13	18	Hex	1.53	38.9
UG-18MM13-D	18	Double Hex	1.53	38.9
UG-SF-18MM13	18	Hex	1.53	38.9
UG-18MM23	18	Hex	2.03	51.6
UG-18MM23-D	18	Double Hex	2.03	51.6
UG-SF-18MM23	18	Hex	2.03	51.6
UG-19MM13	19	Hex	1.53	38.9
UG-19MM13-D	19	Double Hex	1.53	38.9
UG-19MM43	19	Hex	1.53	38.9
UG-19MM43-D	19	Double Hex	1.53	38.9
UG-FL-19MM13	19	Hex	1.53	38.9
UG-SF-19MM13	19	Hex	1.53	38.9
UG-SF-19MM43	19	Hex	1.53	38.9
UG-20MM13	20	Hex	1.53	38.9

## 3/8" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN. MM.	
UG-M-7MME3	7	Hex	1.25	31.8
UG-M-7MM13	7	Hex	1.28	32.5
UG-SM-7MM13	7	Hex	1.28	32.5
UG-MB-7MM23	7	Hex	2.04	51.8
UG-M-8MM13	8	Hex	1.28	32.5
UG-M-8MME3	8	Hex	1.28	32.5
UG-MSF-8MM13	8	Hex	1.28	32.5
UG-M-8MM23	8	Hex	2.03	51.6
UG-MB-8MM23	8	Hex	2.03	51.6
UG-SM-8MM23	8	Hex	2.03	51.6
UG-SWMSF-8MM23	8	Hex	2.03	51.6
UG-MB-9MM23	9	Hex	2.03	51.6
UG-M-10MM03	10	Hex	0.9	22.7
UG-MVC-806-10MM	10	Hex	1.2	30.5
UG-M-10MME3	10	Hex	1.28	32.5
UG-M-10MM13	10	Hex	1.28	32.5
UG-SM-10MM13	10	Hex	1.28	32.5
UG-M-10MM13-D	10	Double Hex	1.28	32.5
UG-M-10MM43	10	Hex	1.28	32.5
UG-MSF-10MM13	10	Hex	1.28	32.5
UG-MSF-10MM43	10	Hex	1.28	32.5
UG-SWMSF-10MM13	10	Hex	1.28	32.5
UG-SM-10MM23	10	Hex	2.02	51.3
UG-OSM-10MM23	10	Hex	2.03	51.6
UG-MB-10MM23-D	10	Double Hex	2.03	51.6
UG-M-10MM23	10	Hex	2.03	51.6
UG-MB-10MM23	10	Hex	2.03	51.6
UG-MBVC-804-10MM	10	Hex	2.03	51.6
UG-MSF-10MM23	10	Hex	2.03	51.6
UG-MB-SF-10MM23	10	Hex	2.03	51.6
UG-OSMB-10MM23	10	Hex	2.03	51.6
UG-SWMSF-10MM23	10	Hex	2.03	51.6
UG-M-10MM33	10	Hex	3.53	89.7
UG-MB-10MM33	10	Hex	3.53	89.7
UG-MSF-10MM33	10	Hex	3.53	89.7
UG-SWMSF-10MM33	10	Hex	3.53	89.7
UG-M-11MM13	11	Hex	1.28	32.5
UG-OSMB-11MM23	11	Hex	2.03	51.6
UG-MB-11MM23	11	Hex	2.03	51.6
UG-MB-SF-11MM23	11	Hex	2.03	51.6
UG-SM-11MM23	11	Hex	2.03	51.6
UG-SWMSF-11MM23	11	Hex	2.03	51.6
UG-M-12MM03-D	12	Double Hex	0.91	23.1
UG-M-12MM03	12	Hex	0.91	23.1
UG-M-12MM13	12	Hex	1.53	38.9
UG-M-12MM13-D	12	Double Hex	1.53	38.9
UG-SWMSF-12MM13	12	Hex	1.53	38.9

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN. MM.	
UG-M-12MM23	12	Hex	2.03	51.6
UG-MB-12MM23	12	Hex	2.03	51.6
UG-MB-12MM23-D	12	Double Hex	2.03	51.6
UG-SM-12MM23	12	Hex	2.03	51.6
UG-SM-SF-12MM23	12	Hex	2.03	51.6
UG-MBVCCB-305-12MM	12	Hex	2.53	64.3
UG-M-13MM03	13	Hex	0.91	23.1
UG-M-13MM13	13	Hex	1.53	38.9
UG-M-13MME3	13	Hex	1.53	38.9
UG-M-13MM13-D	13	Double Hex	1.53	38.9
UG-M-13MM43	13	Hex	1.53	38.9
UG-M-13MM43-D	13	Double Hex	1.53	38.9
UG-MB-13MM23	13	Hex	1.53	38.9
UG-MB-13MM23-D	13	Double Hex	1.53	38.9
UG-MFL-13MM43	13	Hex	1.53	38.9
UG-MSF-13MM13	13	Hex	1.53	38.9
UG-MSF-13MM23	13	Hex	1.53	38.9
UG-MSF-13MM43	13	Hex	1.53	38.9
UG-SM-13MM13	13	Hex	1.53	38.9
UG-SM-13MM23	13	Hex	1.53	38.9
UG-SM-13MM43	13	Hex	1.53	38.9
UG-SWMSF-13MM13	13	Hex	1.54	39.1
UG-SWMSF-13MM23	13	Hex	2.03	51.6
UG-M-13MM23	13	Hex	2.04	51.8
UG-SWM-13MM23	13	Hex	2.04	51.8
UG-SWMSF-13MM23	13	Hex	2.04	51.8
UG-MB-13MM33	13	Hex	3.53	89.7
UG-MB-SF-13MM33	13	Hex	3.53	89.7
UG-SM-13MM33	13	Hex	3.53	89.7
UG-M-14MM13	14	Hex	1.53	38.9
UG-M-14MM13-D	14	Double Hex	1.53	38.9
UG-M-14MM43-D	14	Double Hex	1.53	38.9
UG-M-14MM23	14	Hex	2.03	51.6
UG-MB-14MM23	14	Hex	2.03	51.6
UG-MBSF-14MM23	14	Hex	2.03	51.6
UG-MB-14MM23-D	14	Double Hex	2.03	51.6
UG-SWMSF-14MM23	14	Hex	2.03	51.6
UG-SWMSF-14MM33	14	Hex	2.03	51.6
UG-MB-14MM33	14	Hex	3.53	89.7
UG-M-15MM03	15	Hex	0.97	24.7
UG-M-15MM13	15	Hex	1.53	38.9
UG-M-15MM13-D	15	Double Hex	1.53	38.9
UG-MSF-15MM13	15	Hex	1.53	38.9
UG-M-15MM43	15	Hex	1.53	38.9
UG-SM-15MM43	15	Hex	1.53	38.9
UG-SWMSF-15MM13	15	Hex	1.53	38.9

# UGS SERIES SOCKETS

## 3/8" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC

(CONTINUED)

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-M-15MM23	15	Hex	2.03	51.6
UG-MB-15MM23	15	Hex	2.03	51.6
UG-MBSF-15MM23	15	Hex	2.03	51.6
UG-MB-SF-15MM23	15	Hex	2.03	51.6
UG-SM-15MM23	15	Hex	2.03	51.6
UG-SWM-15MM33	15	Hex	2.03	51.6
UG-SWMSF-15MM23	15	Hex	2.03	51.6
UG-M-15MM33	15	Hex	3.53	89.7
UG-MB-15MM33	15	Hex	3.53	89.7
UG-M-16MM43	16	Hex	1.53	38.9
UG-M-17MM13	17	Hex	1.53	38.9
UG-SM-17MM23	17	Hex	1.53	38.9
UG-SWMSF-17MM13	17	Hex	1.53	38.9
UG-SWMSF-17MM23	17	Hex	1.53	38.9
UG-M-17MM23	17	Hex	2.03	51.6
UG-MB-17MM23	17	Hex	2.03	51.6
UG-M-18MM13	18	Hex	1.53	38.9
UG-SWMSF-18MM13	18	Hex	1.53	38.9
UG-SWMSF-18MM23	18	Hex	1.53	38.9
UG-M-18MM23	18	Hex	2.03	51.6
UG-MB-18MM23	18	Hex	2.03	51.6
UG-M-19MM13	19	Hex	1.53	38.9
UG-SWMSF-19MM13	19	Hex	1.53	38.9

## 1/2" SQUARE DRIVE SOCKETS, SAE, NON-MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-5608-D	1/4	Double Sq.	1.53	38.9
UG-5110	5/16	Hex	1.53	38.9
UG-5110-D	5/16	Double Hex	1.53	38.9
UG-SF-5113	13/32	Hex	1.53	38.9
UG-5114	7/16	Hex	1.53	38.9
UG-5114-D	7/16	Double Hex	1.53	38.9
UG-5814-D	7/16	Double Sq.	3.28	83.3
UG-5616	1/2	Square	1.53	38.9
UG-5616-D	1/2	Double Sq.	1.53	38.9
UG-5916	1/2	Square	1.53	38.9
UG-5916-D	1/2	Double Sq.	1.53	38.9
UG-FL-5516	1/2	Hex	3.28	83.3
UG-SF-5516	1/2	Hex	3.28	83.3
UG-5618	9/16	Square	1.53	38.9
UG-5618-D	9/16	Double Sq.	1.53	38.9
UG-5918	9/16	Square	1.53	38.9
UG-5918-D	9/16	Double Sq.	1.53	38.9
UG-5118	9/16	Hex	1.53	38.9
UG-SF-5118	9/16	Hex	1.53	38.9
UG-5218	9/16	Hex	2.28	57.9
UG-5318	9/16	Hex	3.28	83.3
UG-5318-D	9/16	Double Hex	3.28	83.3
UG-5818-D	9/16	Double Sq.	3.28	83.3
UG-5119	19/32	Hex	1.53	38.9
UG-5419-D	19/32	Double Hex	1.53	38.9
UG-5219-D	19/32	Double Hex	2.28	57.9
UG-5420	19/32	Hex	3.28	83.3
UG-5120	5/8	Hex	1.53	38.9
UG-5120-D	5/8	Double Hex	1.53	38.9
UG-5620	5/8	Square	1.53	38.9
UG-5620-D	5/8	Double Sq.	1.53	38.9
UG-FL-5120	5/8	Hex	1.53	38.9
UG-SC-520	5/8	Hex	1.53	38.9
UG-5720	5/8	Square	2.28	57.9
UG-5420-D	5/8	Double Hex	3.28	83.3
UG-SF-5420	5/8	Hex	3.28	83.3
UG-SF-5120	5/8	Hex	3.53	89.7
UG-5121-D	21/32	Double Hex	1.53	38.9
UG-5122	11/16	Hex	1.53	38.9
UG-5122-D	11/16	Double Hex	1.53	38.9
UG-5422	11/16	Hex	1.53	38.9
UG-5422-D	11/16	Double Hex	1.53	38.9
UG-5622	11/16	Square	1.53	38.9
UG-FL-5122	11/16	Hex	1.53	38.9
UG-SF-5122	11/16	Hex	1.53	38.9
UG-SF-5422	11/16	Hex	1.53	38.9
UG-5222	11/16	Hex	2.28	57.9
UG-FL-5222	11/16	Hex	2.28	57.9

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-SF-5222	11/16	Hex	2.28	57.9
UG-5322	11/16	Hex	3.28	83.3
UG-5322-D	11/16	Double Hex	3.28	83.3
UG-5522	11/16	Hex	3.28	83.3
UG-5522-D	11/16	Double Hex	3.28	83.3
UG-SF-5522	11/16	Hex	3.28	83.3
UG-SF-SW-282	3/4	Hex	1.03	26.2
UG-SW-282	3/4	Hex	1.03	26.2
UG-SW-282-D	3/4	Double Hex	1.03	26.2
UG-5124	3/4	Hex	1.53	38.9
UG-5124-D	3/4	Double Hex	1.53	38.9
UG-FL-5124	3/4	Hex	1.53	38.9
UG-SF-5124	3/4	Hex	1.53	38.9
UG-5224	3/4	Hex	2.28	57.9
UG-5224-D	3/4	Double Hex	2.28	57.9
UG-FL-5224	3/4	Hex	2.28	57.9
UG-SF-5224	3/4	Hex	2.28	57.9
UG-5324	3/4	Hex	3.28	83.3
UG-5324-D	3/4	Double Hex	3.28	83.3
UG-FL-5324	3/4	Hex	3.28	83.3
UG-SF-5324	3/4	Hex	3.28	83.3
UG-5225-D	25/32	Double Hex	2.28	57.9
UG-SF-5126	13/16	Hex	1.03	26.2
UG-5126	13/16	Hex	1.53	38.9
UG-5126-D	13/16	Double Hex	1.53	38.9
UG-5426	13/16	Hex	1.53	38.9
UG-5426-D	13/16	Double Hex	1.53	38.9
UG-FL-5126	13/16	Hex	1.53	38.9
UG-SF-5426	13/16	Hex	1.53	38.9
UG-5226	13/16	Hex	2.28	57.9
UG-5226-D	13/16	Double Hex	2.28	57.9
UG-5526	13/16	Hex	3.28	83.3
UG-5526-D	13/16	Double Hex	3.28	83.3

## 1/2" SQUARE DRIVE SOCKETS, SAE, MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-M-5110	5/16	Hex	1.53	38.9
UG-M-5120	5/8	Hex	1.53	38.9
UG-M-5420	5/8	Hex	3.28	83.3
UG-M-5122	11/16	Hex	1.53	38.9
UG-M-5124	3/4	Hex	1.53	38.9
UG-MB-5224-D	3/4	Double Hex	2.28	57.9
UG-MB-5324	3/4	Hex	3.28	83.3

# UGS SERIES SOCKETS

## 1/2" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-8MM15	8	Hex	1.53	38.9
UG-8MM15-D	8	Double Hex	1.53	38.9
UG-SF-8MM15	8	Hex	1.53	38.9
UG-11MM15	11	Hex	1.53	38.9
UG-SF-11MM15	11	Hex	1.53	38.9
UG-13MM15	13	Hex	1.53	38.9
UG-SF-13MM15	13	Hex	1.53	38.9
UG-CSF-13MM45	13	Hex	1.53	38.9
UG-13MM45	13	Hex	1.53	38.9
UG-SF-13MM45	13	Hex	1.53	38.9
UG-13MM25	13	Hex	2.28	57.9
UG-SF-13MM25	13	Hex	2.28	57.9
UG-FL-13MM25	13	Hex	2.28	57.9
UG-13MM35	13	Hex	3.28	83.3
UG-13MM55	13	Hex	3.28	83.3
UG-SF-13MM55	13	Hex	3.28	83.3
UG-13MM55-D	13	Double Hex	3.28	83.3
UG-FL-13MM55	13	Hex	3.28	83.3
UG-SF-13MM35	13	Hex	3.28	83.3
UG-14MM65	14	Square	1.53	38.9
UG-SF-14MM15	14	Hex	1.53	38.9
UG-14MM15	14	Hex	1.54	39.1
UG-14MM25	14	Hex	2.28	57.9
UG-15MM15	15	Hex	1.53	38.9
UG-15MM15-D	15	Double Hex	1.53	38.9
UG-15MM45	15	Hex	1.53	38.9
UG-15MM45-D	15	Double Hex	1.53	38.9
UG-15MME5	15	Hex	1.53	38.9
UG-FL-15MM15	15	Hex	1.53	38.9
UG-SF-15MM15	15	Hex	1.53	38.9
UG-SF-15MM45	15	Hex	1.53	38.9
UG-15MM25	15	Hex	2.28	57.9
UG-SF-15MM25	15	Hex	2.28	57.9
UG-15MM35	15	Hex	3.28	83.3
UG-FL-15MM45	15	Hex	3.28	83.3
UG-15MM55	15	Hex	3.28	83.3
UG-SF-15MM35	15	Hex	3.28	83.3
UG-16MM15	16	Hex	1.53	38.9
UG-16MM15-D	16	Double Hex	1.53	38.9
UG-FL-16MM15	16	Hex	1.53	38.9
UG-SF-16MM15	16	Hex	1.53	38.9
UG-16MM45	16	Hex	3.28	83.3
UG-16MM45-D	16	Double Hex	3.28	83.3
UG-SF-16MM45	16	Hex	3.28	83.3
UG-17MM15	17	Hex	1.53	38.9
UG-SF-17MM15	17	Hex	1.53	38.9
UG-17MM15-D	17	Double Hex	1.53	38.9
UG-SF-17MM45	17	Hex	1.53	38.9

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-17MM45	17	Hex	1.53	38.9
UG-17MM45-D	17	Double Hex	1.53	38.9
UG-FL-17MM15	17	Hex	1.53	38.9
UG-17MM25	17	Hex	2.28	57.9
UG-17MM25-D	17	Double Hex	2.28	57.9
UG-SF-17MM25	17	Hex	2.28	57.9
UG-17MM55	17	Hex	3.28	83.3
UG-17MM55-D	17	Double Hex	3.28	83.3
UG-SF-17MM55	17	Hex	3.28	83.3
UG-18MM15	18	Hex	1.53	38.9
UG-SF-18MM15	18	Hex	1.53	38.9
UG-18MM15-D	18	Double Hex	1.53	38.9
UG-18MM45	18	Hex	1.53	38.9
UG-18MM45-D	18	Double Hex	1.53	38.9
UG-19MM15-D	18	Double Hex	1.53	38.9
UG-FL-18MM15	18	Hex	1.53	38.9
UG-18MM25	18	Hex	2.28	57.9
UG-SF-18MM25	18	Hex	2.28	57.9
UG-18MM25-D	18	Double Hex	2.28	57.9
UG-FL-18MM25	18	Hex	2.28	57.9
UG-18MM35	18	Hex	3.28	83.3
UG-18MM35-D	18	Double Hex	3.28	83.3
UG-FL-18MM35	18	Hex	3.28	83.3
UG-SF-18MM35	18	Hex	3.28	83.3
UG-SF-18MM45	18	Hex	3.53	89.7
UG-19MM15	19	Hex	1.53	38.9
UG-FL-19MM15	19	Hex	1.53	38.9
UG-SF-19MM15	19	Hex	1.53	38.9
UG-19MM25	19	Hex	2.28	57.9
UG-SF-19MM25	19	Hex	2.28	57.9
UG-CSF-19MM25	19	Hex	2.28	57.9
UG-FL-19MM25	19	Hex	2.28	57.9
UG-19MM35	19	Hex	3.28	83.3
UG-19MM35-D	19	Double Hex	3.28	83.3
UG-SF-19MM35	19	Hex	3.28	83.3
UG-20MM15	20	Hex	1.53	38.9
UG-SF-20MM15	20	Hex	1.53	38.9
UG-20MM25	20	Hex	2.28	57.9
UG-20MM25-D	20	Double Hex	2.28	57.9
UG-21MM15	21	Hex	1.53	38.9
UG-21MM15-D	21	Double Hex	1.53	38.9
UG-21MM45	21	Hex	1.53	38.9
UG-21MM45-D	21	Double Hex	1.53	38.9
UG-SF-21MM15	21	Hex	1.53	38.9
UG-SF-21MM45	21	Hex	1.53	38.9
UG-21MM25	21	Hex	2.28	57.9
UG-SF-21MM25	21	Hex	2.28	57.9
UG-21MM25-D	21	Double Hex	2.28	57.9
UG-21MM55	21	Hex	3.28	83.3
UG-SF-21MM55	21	Hex	3.28	83.3

## 1/2" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-M-8MM15	8	Hex	1.53	38.9
UG-M-11MM15	11	Hex	1.53	38.9
UG-M-13MM15	13	Hex	1.53	38.9
UG-M-13MM45	13	Hex	1.53	38.9
UG-MSF-13MM15	13	Hex	1.53	38.9
UG-SWMFL-13MM15	13	Hex	1.53	38.9
UG-M-13MM25	13	Hex	2.28	57.9
UG-MB-13MM25	13	Hex	2.28	57.9
UG-MBSF-13MM25	13	Hex	2.28	57.9
UG-M-13MM35	13	Hex	3.28	83.3
UG-M-13MM55	13	Hex	3.28	83.3
UG-MB-13MM35	13	Hex	3.28	83.3
UG-MB-13MM55	13	Hex	3.28	83.3
UG-MBSF-13MM35	13	Hex	3.28	83.3
UG-M-14MM15	14	Hex	1.53	38.9
UG-MSF-14MM15	14	Hex	1.53	38.9
UG-MBSF-14MM25	14	Hex	2.28	57.9
UG-MB-14MM25	14	Hex	2.28	57.9
UG-MB-14MM25-D	14	Double Hex	2.28	57.9
UG-M-15MM15	15	Hex	1.53	38.9
UG-M-15MME5	15	Hex	1.53	38.9
UG-MSF-15MM15	15	Hex	1.53	38.9
UG-SWMSF-15MM15	15	0	1.53	38.9
UG-SWM-15MM25	15	Hex	2.25	57.2
UG-M-15MM25	15	Hex	2.28	57.9
UG-MB-15MM25	15	Hex	2.28	57.9
UG-MSF-15MM25	15	Hex	2.28	57.9
UG-SM-15MM25	15	Hex	2.28	57.9
UG-M-15MM35-D	15	Double Hex	3.28	83.3
UG-M-15MM45	15	Hex	3.28	83.3
UG-M-15MM55	15	Hex	3.28	83.3
UG-MB-15MM35	15	Hex	3.28	83.3
UG-MSF-15MM35	15	Hex	3.28	83.3
UG-SM-15MM35	15	Hex	3.28	83.3
UG-M-16MM15	16	Hex	1.53	38.9
UG-M-16MM45	16	Hex	1.53	38.9
UG-MSF-17MM15	17	Hex	0.59	15
UG-M-17MM45	17	Hex	1.53	38.9
UG-MCBC-17MM15	17	Hex	1.53	38.9
UG-MSF-17MM45	17	Hex	1.53	38.9
UG-M-17MM15	17	Hex	1.53	38.9
UG-M-17MM15-D	17	Double Hex	1.53	38.9
UG-MB-17MM25	17	Hex	2.28	57.9
UG-MB-17MM35	17	Hex	3.28	83.3
UG-MB-17MM55	17	Hex	3.28	83.3
UG-M-18MM15	18	Hex	1.53	38.9
UG-MSF-18MM15	18	Hex	1.53	38.9
UG-SM-18MM25	18	Hex	1.53	38.9
UG-M-18MM25	18	Hex	2.28	57.9
UG-MB-18MM25	18	Hex	2.28	57.9
UG-M-18MM35	18	Hex	3.28	83.3

# UGS SERIES SOCKETS

## 1/2" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC (CONTINUED)

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-MB-18MM35	18	Hex	3.28	83.3
UG-SM-18MM35	18	Hex	3.28	83.3
UG-MSF-18MM45	18	Hex	3.53	89.7
UG-M-19MM15	19	Hex	1.53	38.9
UG-M-21MM15	21	Hex	1.53	38.9
UG-MSF-21MM15	21	Hex	1.53	38.9
UG-M-21MM25	21	Hex	2.28	57.9
UG-MB-21MM25	21	Hex	2.28	57.9

## 5/8" SQUARE DRIVE SOCKETS, SAE, NON-MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-FL-6324	3/4	Hex	2.03	51.6
UG-SF-6324	3/4	Hex	2.03	51.6
UG-6324	3/4	Hex	3.53	89.7
UG-SF-6326	13/16	Hex	2.03	51.6
UG-6326	13/16	Hex	3.53	89.7
UG-6326-D	13/16	Double Hex	3.53	89.7

## 5/8" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-CSF-18MM36	18	Hex	3.53	89.7
UG-SF-19MM36	19	Hex	2.03	51.6
UG-VFSF-132-19MM	19	Hex	3.5	88.9
UG-FL-21MM36	21	Hex	2.03	51.6
UG-SF-21MM36	21	Hex	2.03	51.6
UG-21MM36	21	Hex	3.53	89.7

## 5/8" SQUARE DRIVE SOCKETS, METRIC, MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-M-21MM36	21	Hex	2.03	51.6

## 3/4" SQUARE DRIVE SOCKETS, SAE, NON-MAGNETIC

Part Number	Fastener End Size MM.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-7340	1 1/4	Hex	4.03	102.4

## 3/4" SQUARE DRIVE SOCKETS, METRIC, NON-MAGNETIC

Part Number	Fastener End Size IN.	Fastener End Shape	Overall Length IN.	Overall Length MM.
UG-VGSF-41-19MM	19	Hex	3.5	88.9
UG-VGSF-60-21MM	21	Hex	4.03	102.4
UG-VGSF-43-22MM	22	Hex	4.03	102.4
UG-SF-30MM37	30	Hex	4.03	102.4
UG-30MM37	30	Hex	4.03	102.4
UG-SF-32MM37	32	Hex	4.03	102.4
UG-32MM37	32	Hex	4.03	102.4

## 3/8" FEMALE SQUARE SERVICE DRIVE TORX BIT

Part Number	Fastener End Size IN.	Overall Length IN.	Overall Length MM.
UG-834-TX-45-5	T45	5	127
UG-834-TX-50	T50	2.65	67.3
UG-834-TX-50R	T50	2.65	67.3

# UGS SERIES EXTENSIONS & ADAPTERS

## 1/4" MALE HEX DRIVE EXTENSIONS WITH 1/4" MALE SQUARE

Part Number	Overall Length IN.	Overall Length MM.
UG-EX-250-2	2	50.8
UG-EX-250-3	3	76.2
UG-EX-250-4	4	101.6
UG-EX-250-5	5	127
UG-EX-250-6	6	152.4
UG-EX-250-8	8	203.2
UG-EX-250-10	10	254
UG-EX-250-12	12	304.8
UG-EX-250-18	18	457.2

## 1/4" MALE HEX DR. ADAPTERS WITH 3/8" MALE SQUARE

Part Number	Overall Length IN.	Overall Length MM.
UG-EX-370-2	2	50.8
UG-EX-370-B-2	2	50.8
UG-EX-370-3	3	76.2
UG-EX-370-B-3	3	76.2
UG-EX-370-4	4	101.6
UG-EX-370-B-4	4	101.6
UG-EX-370-5	5	127
UG-EX-370-6	6	152.4
UG-EX-370-8	8	203.2
UG-EX-370-10	10	254



# UGS SERIES EXTENSIONS & ADAPTERS

## 1/4" FEMALE SQ. DR. EXTENSIONS WITH 1/4" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-255-2	2	50.8
UG-HA-15608	2	50.8
UG-HA-15608-2X-2	2	50.8
UG-EX-255-B-2	2	50.8
UG-EX-255-3	3	76.2
UG-EX-255-4	4	101.6
UG-HA-15608-2X-4	4	101.6
UG-EX-255-B-4	4	101.6
UG-EX-255-6	6	152.4
UG-HA-15608-2X-6	6	152.4
UG-EX-255-B-6	6	152.4
UG-EX-255-8	8	203.2
UG-EX-255-10	10	254
UG-EX-255-12	12	304.8
UG-HA-15608-2X-14	14	355.6
UG-EX-255-18	18	457.2

## 3/8" FEMALE SQ. DR. ADAPTERS WITH 1/4" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-257-2	2	50.8
UG-EX-257-4	4	101.6
UG-EX-257-5	5	127
UG-EX-257-6	6	152.4

## 3/8" FEMALE SQ. DR. ADAPTERS WITH 1/2" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-503	1.5	38.1
UG-EX-503-B	1.5	38.1

## 3/8" FEMALE SQUARE DRIVE ADAPTERS WITH 5/8" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-622	1.53	38.1

## 3/8" FEMALE SQ. DR. EXT. WITH 3/8" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-374	1.4	35.6
UG-EX-374-B	1.4	35.6
UG-EX-376-2	2	50.8
UG-EX-376-B-2	2	50.8
UG-EX-376-3	3	76.2
UG-EX-376-B-3	3	76.2
UG-EX-376-4	4	101.6
UG-EX-376-B-4	4	101.6
UG-HC-8612-4	4	101.6
UG-EX-376-5	5	127
UG-EX-376-B-5	5	127
UG-EX-376-6	6	152.4
UG-EX-376-B-6	6	152.4
UG-EX-376-8	8	203.2
UG-EX-376-B-8	8	203.2
UG-EX-376-9	9	228.6
UG-EX-376-B-9	9	228.6
UG-EX-376-10	10	254
UG-EX-376-B-10	10	254
UG-EX-376-12	12	304.8
UG-EX-376-B-12	12	304.8
UG-EX-376-15	15	381
UG-HC-22712-15	15.3	388.6
UG-EX-376-18	18	457.2
UG-EX-376-24	24	609.6
UG-EX-376-36	36	914.4

## 7/16" MALE HEX POWER DR. ADAPTERS WITH 1/2" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-501-2	2	50.8
UG-EX-501-3	3	76.2
UG-EX-501-4	4	101.6
UG-EX-501-6	6	152.4

## 7/16" MALE HEX DR. ADAPTERS WITH 3/8" MALE SQUARE

Part Number	Overall Length	
	IN.	MM.
UG-EX-371-2	2	50.8
UG-EX-371-3	3	76.2
UG-EX-371-4	4	101.6
UG-EX-371-6	6	152.4

## 1/2" FEMALE SQ. DRIVE ADAPTERS WITH 3/8" MALE SQ.

Part Number	Overall Length	
	IN.	MM.
UG-EX-377-2	2	50.8
UG-EX-377-B-3	3	76.2
UG-EX-377-4	4	101.6
UG-EX-377-M-4	4	101.6
UG-EX-377-6	6	152.4
UG-EX-377-B-6	6	152.4
UG-EX-377-8	8	203.2
UG-EX-377-12	12	304.8
UG-EX-377-B-12	12	304.8

# UGS SERIES EXTENSIONS & ADAPTERS

## 1/2" FEMALE SQ. DRIVE ADAPTERS WITH 3/8" MALE SQ.

Part Number	Overall Length	
	IN.	MM.
UG-EX-377-2	2	50.8
UG-EX-377-B-3	3	76.2
UG-EX-377-4	4	101.6
UG-EX-377-M-4	4	101.6
UG-EX-377-6	6	152.4
UG-EX-377-B-6	6	152.4
UG-EX-377-8	8	203.2
UG-EX-377-12	12	304.8
UG-EX-377-B-12	12	304.8

## 1/2" FEMALE SQ. DRIVE EXTENSIONS

Part Number	Overall Length	
	IN.	MM.
UG-EX-508-8	8	203.2
UG-EX-508-B-8	8	203.2
UG-HE-25316	8	203.2
UG-HE-25316-2X-8	8	203.2
UG-EX-508-9	9	228.6
UG-EX-508-10	10	254
UG-EX-508-B-10	10	254
UG-EX-508-12	12	304.8
UG-EX-508-B-12	12	304.8
UG-EX-508-15	15	381
UG-EX-508-16	16	406.4
UG-EX-508-18	18	457.2
UG-EX-508-20	20	508
UG-EX-508-36	36	914.4

# UGS SERIES BIT HOLDERS

## 1/4" MALE HEX POWER DRIVE BIT HOLDERS, MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-M-490	3.59	91.2	1/4	Hex
UG-M-490-4	4.59	116.6	1/4	Hex
UG-M-490-6	6.59	167.4	1/4	Hex
UG-M-490-8	8.59	218.2	1/4	Hex
UG-M-490-14	14.59	370.6	1/4	Hex

## 1/4" FEMALE SQUARE DRIVE BIT HOLDERS, NON-MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-825	1.03	26.2	1/4	Hex

## 1/4" FEMALE SQUARE DRIVE BIT HOLDERS, MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-M-825-EB	2.46	62.5	1/4	Hex
UG-M-825	2.9	73.7	1/4	Hex

## 3/8" FEMALE SQ. DRIVE BIT HOLDERS, NON-MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-838	1.53	38.9	1/4	Hex
UG-835	1.53	38.9	5/16	Hex

## 3/8" FEMALE SQUARE DRIVE BIT HOLDER, MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-M-835	3.55	90.2	5/16	Hex

## 1/2" FEMALE SQ DRIVE BIT HOLDER, NON- MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-855	1.78	45.2	5/16	Hex

## 1/2" FEMALE SQ. DRIVE BIT HOLDERS, MAGNETIC

Part Number	Overall Length		Hex Insert Bit	
	IN.	MM.	Size. IN.	Shape
UG-M-858	3.26	82.8	1/4	Hex
UG-M-855	3.55	90.2	5/16	Hex

# UGH SERIES

## MALE HEX DR. TO MALE SQUARE ADAPTERS, SAE

Part Number	Hex Drive IN.	Male Square IN.	Overall Length IN.	MM.
NC-EX-370-8	1/4	3/8	8	203.2
NC-EX-500-3	1/4	1/2	3	76.2
NC-EX-500-4	1/4	1/2	4	101.6
NC-EX-500-B-4	1/4	1/2	4	101.6
NC-EX-500-6	1/4	1/2	6	152.4
NC-EX-380-4	5/16	3/8	4	101.6
NC-EX-251-6	7/16	1/4	6	152.4
NC-EX-251-10	7/16	1/4	10	254
NC-EX-501-5	7/16	1/2	5	127
NC-EX-501-8-NY	7/16	1/2	8	203.2
NC-EX-501-10-NY	7/16	1/2	10	254
NC-EX-501-12-NY	7/16	1/2	12	304.8
NC-EX-501-15-NY	7/16	1/2	15	381
NC-EX-757-3	7/16	3/4	3	76.2
NC-EX-502-6	5/8	1/2	6	152.4
NC-EX-502-8	5/8	1/2	8	203.2
NC-EX-758-4	5/8	3/4	4	101.6

## FEMALE SQ. DR. TO MALE SQUARE ADAPTERS, SAE

Part Number	Female Square IN.	Male Square IN.	Overall Length IN.	MM.
NC-EX-372	1/4	3/8	1	25.4
NC-EX-254	3/8	1/4	1.25	31.8
NC-EX-254-B	3/8	1/4	1.25	31.8
NC-EX-257-12-NY	3/8	1/4	12	304.8
NC-EX-257-2	3/8	1/4	2	50.8
NC-EX-257-3	3/8	1/4	3	76.2
NC-EX-257-8	3/8	1/4	8	203.2
NC-EX-507-2	3/8	1/2	2	50.8
NC-EX-507-3	3/8	1/2	3	76.2
NC-EX-507-6	3/8	1/2	6	152.4
EX-507-8-NC	3/8	1/2	8	203.2
NC-EX-260-2	1/2	1/4	2	50.8
NC-EX-260-4	1/2	1/4	4	101.6
NC-EX-377-B-2	1/2	3/8	2	50.8
NC-EX-377-3	1/2	3/8	3	76.2
NC-EX-751-B	1/2	3/4	1.81	46
NC-EX-505	5/8	1/2	1.87	47.5
NC-EX-505-B	5/8	1/2	1.88	47.7
NC-EX-510-19.5-NY	3/4	1/2	19.5	495.3
NC-EX-510-19.688-NY	3/4	1/2	19.68	500.1
NC-EX-506	3/4	1/2	2	50.8
NC-EX-506-B	3/4	1/2	2	50.8
NC-EX-510-4	3/4	1/2	4	101.6
NC-EX-510-6	3/4	1/2	6	152.4
NC-EX-510-8	3/4	1/2	8	203.2
NC-EX-628-14	3/4	5/8	14	355.6
NC-EX-625	3/4	5/8	2	50.8
NC-EX-756-10	1	3/4	10.25	260.4

## FEMALE SQ. DR. TO MALE SQUARE EXTENSIONS, SAE

Part Number	Female Square IN.	Male Square IN.	Overall Length IN.	MM.
NC-EX-255-6	1/4	1/4	6	152.4
NC-EX-374-B	3/8	3/8	1.37	34.8
NC-EX-376-3	3/8	3/8	3	76.2
NC-EX-376-4-NY	3/8	3/8	4	101.6
NC-EX-504	1/2	1/2	1.71	43.4
NC-EX-504-B	1/2	1/2	1.72	43.6
NC-EX-753	3/4	3/4	2.25	57.2
NC-EX-753-B	3/4	3/4	2.25	57.2
NC-EX-755-3	3/4	3/4	3	76.2
NC-EX-755-4	3/4	3/4	4	101.6
NC-EX-755-6	3/4	3/4	6	152.4
NC-EX-755-B-6	3/4	3/4	6	152.4
ORNC-EX-755-6	3/4	3/4	6	152.4
NC-EX-755-8	3/4	3/4	8	203.2
NC-EX-755-B-8	3/4	3/4	8	203.2
NC-EX-755-10	3/4	3/4	10	254
NC-EX-755-10	3/4	3/4	10	254
ORNC-EX-755-10	3/4	3/4	10	254
NC-EX-755-12	3/4	3/4	12	304.8
NC-EX-755-15	3/4	3/4	15	381
NC-EX-1003-18	1	1	18	457.2

## FEMALE SQUARE DRIVE, QUICK RELEASING CHUCKS

Part Number	Drive Size IN.	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-QR-108	1/4	1/4	Hex	1.5	38.1
NC-QR-308	3/8	1/4	Hex	1.75	44.5
NC-QR-508	3/8	1/4	Hex	2.125	54
NC-QR-514	1/2	7/16	Hex	2.125	54
NC-QR-520	1/2	5/8	Hex	2.625	66.7
NC-QR-720	3/4	5/8	Hex	3.125	79.4

## 1/4" FEMALE HEX DRIVE, QUICK RELEASING CHUCK

Part Number	Fastener End Size MM.	Shape	Overall Length IN.	MM.
NC-MRQRS-108-10MM	10	Hex	1.56	39.6

## FEMALE SQ, DR. BIT HOLDERS/ADAPTERS WITH SET SCREW

Part Number	Drive Size IN.	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-SC-108	1/4	1/4	Hex	1.31	33.3
NC-SC-308	3/8	1/4	Hex	1.58	40.1
NC-SC-308-2344A	3/8	1/4	Hex	2.34	59.5
NC-SC-308-425A	3/8	1/4	Hex	4.25	108
NC-SC-308-675A	3/8	1/4	Hex	6.75	171.5
NC-SC-314	3/8	7/16	Hex	1.45	36.9
NC-SC-508	1/2	1/4	Hex	1.58	40.1
NC-SC-514	1/2	7/16	Hex	1.7	43.1
NC-SC-514-4032	1/2	7/16	Hex	4.03	102.4
NC-zv	1/2	5/8	Hex	1.58	40.1

## 1/4" MALE HEX DRIVE NUTSETTERS METRIC & SAE

Part Number	Fastener End Size MM.	Shape	Overall Length IN.	MM.
NCO-6N-08-6M-5	6	Female Hex	1.31	5
NCO-6N-08-7M-3	7	Female Hex	1.58	3.04
NC-M6N-0810-6	5/16	Female Hex	2.34	6.04
NCO-6N-08-8M-3	8	Female Hex	4.25	3.04
MNC6N-08-8M-4	8	Female Hex	6.75	4
NCO-6N-08-8M-4	8	Female Hex	1.45	4.04
NCO-6N-08-8M-5	8	Female Hex	1.58	5.04
MDA-10MM-NC	10	Female Hex	1.7	1.84
MNC6N-08-10M-3	10	Female Hex	4.03	3
MNC6N-08-10M-4	10	Female Hex	1.58	4
SMNC6B-08-10M-4	10	Female Hex		4
MNC6N-08-10M-6	10	Female Hex		6
MNC6N-08-10M-6	10	Female Hex		6
SMNC6B-08-10M-6	10	Female Hex		6
MNC6N-08-10M-8	10	Female Hex		8
MNC6N-08-22M-4	22	Female Hex		4.06

## 1/4" MALE HEX DRIVE BIT HOLDERS

Part Number	Fastener End Size MM.	Shape	Overall Length IN.	MM.
NC-490-3	1/4	Female Hex	3	76.2
NC-490-4	1/4	Female Hex	4	101.6
NC-490-9	1/4	Female Hex	9	304.8

# UGH SERIES

## 3/8" FEMALE SQUARE DRIVE STUD SETTERS

Part Number	Fastener End Size IN.	Thread	Overall Length IN.	MM.
NC-WJ-1271-M6X1.0	3/8	M6	1.95	49.6
NC-WJ-1271-M7X1.0	3/8	M7	1.95	49.6
NC-WJ-1271-M8X1.0	3/8	M8	1.95	49.6
NC-WJ-1271-M8X1.25	3/8	M8	1.95	49.6
NC-WJ-1271	3/8	M10	1.89	48.1

## 1/4" FEMALE SQUARE DRIVE SOCKET, MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
MNC-1208	1/4	Hex	1.81	46.05

## 3/8" FEMALE SQUARE DRIVE SOCKETS, MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-M-3112	3/8	Hex	1.33	33.7
MBNC-3512	3/8	Hex	2	50.8
NC-MB-3314	7/16	Hex	3.57	90.9

## 1/4" FEMALE SQ. DRIVE SOCKETS, NON-MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-1308-D-NY	1/4	Double Hex	3.07	78.2
NC-1112	3/8	Hex	1	25.4
NC-1212	3/8	Hex	1.81	46

## 3/8" FEMALE SQ. DRIVE SOCKETS, NON-MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-3108	1/4	Hex	1.3	33.1
NC-3208	1/4	Hex	2.1	53.3
NC-3010	5/16	Hex	.938	23.8
NC-3310	5/16	Hex	3.555	90.3
NC-3411	11/32	Hex	1.327	33.7
NC-3112	3/8	Hex	1.312	33.3
NC-3212	3/8	Hex	2	50.8
NC-3512-NY	3/8	Hex	2.08	52.8
NC-3312	3/8	Hex	3.555	90.3
NC-3014	7/16	Hex	.947	24.1
NC-3414	7/16	Hex	1.5	38.1
MNC-3114	7/16	Hex	1.58	40.1
NC-3114	7/16	Hex	1.58	40.1
NC-3114-D	7/16	Double Hex	1.58	40.1
NC-3514-NY	7/16	Hex	2.077	52.8
NC-3316	1/2	Hex	3.577	90.9
NC-3316-NY	1/2	Hex	3.577	90.9
NC-3018	9/16	Hex	.952	24.18
NC-3018-NY	9/16	Hex	.952	24.18
NC-3518	9/16	Hex	2	50.8
NC-3120	5/8	Hex	1.58	40.1
NC-3220	5/8	Hex	2.08	52.8
NC-3320	5/8	Hex	3.58	90.9
NC-3024	3/4	Hex	1.07	27.2
NC-3224	3/4	Hex	2.08	52.8
NC-3324	3/4	Hex	3.58	90.9
NC-3326-D	13/16	Double Hex	3.58	90.9
NC-3028	7/8	Hex	1.08	27.4
NC-3428	7/8	Hex	1.5	38.1
NC-3228	7/8	Hex	2.08	52.8

## 1/2" FEMALE SQUARE DRIVE SOCKETS, NON-MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-SF-5110	5/16	Hex	1.58	40.1
NC-5112	3/8	Hex	1.53	38.9
NC-SF-5112	3/8	Hex	1.58	40.1
NC-5212	3/8	Hex	2.33	59.1
NC-5116	1/2	Hex	1.58	40.1
NC-SF-5116	1/2	Hex	1.58	40.1
NC-SF-5316	1/2	Hex	3.34	84.5
NC-SF-5418	9/16	Hex	1.58	40.1
NC-5220	5/8	Hex	2.33	59.1
NC-5320	5/8	Hex	3.327	84.5
NC-5424	3/4	Hex	1.58	40.1
NC-SF-5424	3/4	Hex	1.58	40.1
NC-5626	13/16	Square	1.58	40.1
NC-5128	7/8	Hex	1.5	38.1
NC-5128-A	7/8	Hex	1.58	40.1
NC-5428-D	7/8	Double Hex	1.58	40.1
NC-5528	7/8	Hex	3.58	90.9
NC-5230	15/16	Hex	2.327	59.11
NC-5132	1	Hex	1.5	38.1
NC-5134	11/16	Hex	1.7	43.1
NC-5436	11/8	Hex	1.7	43.2
NC-5140	11/4	Hex	1.83	46.4
NC-5140-D	11/4	Double Hex	1.83	46.4
NC-5152-D	15/8	Double Hex	2.077	52.8

## 3/4" FEMALE SQ. DRIVE SOCKETS, NON-MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-7324	3/4	Hex	4	101.6
NC-7524	3/4	Hex	4.08	103.6
NC-7130	15/16	Hex	2.08	52.8
NC-7136	11/8	Hex	2.20	55.9

## 1" FEMALE SQ. DRIVE SOCKETS, NON-MAGNETIC, SAE

Part Number	Fastener End Size IN.	Shape	Overall Length IN.	MM.
NC-8224	3/4	Hex	3	76.2
NC-8636	11/8	Square	2.35	59.7
NC-8148-NY	11/2	Square	2.327	59.1

# UGH SERIES

## 1/4" FEMALE SQUARE DRIVE SOCKETS, MAGNETIC, METRIC

Part Number	Fastener End Size MM. Shape	Overall Length IN. MM.
NC-MB-5.5MM21	5.5 Hex	1.83 46.4
NC-M-6MM21	6 Hex	1.79 45.5
NC-MB-6MM21	6 Hex	1.83 46.4
NC-M-10MM21-NY	10 Hex	1.83 46.4
NC-MB-10MM21	10 Hex	1.83 46.4
NC-M-13MM21	13 Hex	1.83 46.4
NC-MB-13MM21	13 Hex	1.83 46.4

## 3/8" FEMALE SQ. DRIVE SOCKETS, MAGNETIC, METRIC

Part Number	Fastener End Size MM. Shape	Overall Length IN. MM.
NC-M-6MM13	6 Hex	1.33 33.7
NC-MB-6MM23	6 Hex	2.08 52.8
SWMSF-7MM23-NC	7 Hex	2.08 52.8
NC-M-8MM43	8 Hex	1.33 33.7
NC-M-8MM43	8 Hex	1.33 33.7
OSMB-8MM23-NC	8 Hex	2.12 53.9
NC-OSMB-10MM23	10 Hex	2.08 52.8
NC-MB-11MM33-NY	11 Hex	3.58 90.9
SWMSF-12MM13-NC	12 Hex	1.58 40.1
SWMSF-12MM23-NC	12 Hex	2.05 52.1
NCW-M-13MM23	13 Hex	2.08 52.8
NC-MB-13MM23-NY	13 Hex	2.08 52.8
NC-MB-13MM33-NY	13 Hex	3.58 90.9
NC-M-14MM13	14 Hex	1.58 40.1
NC-MB-14MM23	14 Hex	2 50.8
NC-MB-15MM23-NY	15 Hex	2.08 52.8
NC-MB-16MM23	16 Hex	2.08 52.8
NC-M-17MM13-D	17 Double Hex	1.58 40.1

## 1/2" FEMALE SQUARE DRIVE SOCKETS, MAGNETIC, METRIC

Part Number	Fastener End Size MM. Shape	Overall Length IN. MM.
NC-M-10MM15	10 Hex	1.58 40.1
NC-MB-16MM25	16 Hex	2.33 59.1
NC-MSF-16MM35-NY	16 Hex	3.33 84.5
NC-MSF-18MM15-NY	18 Hex	1.58 40.1
NC-MBSF-18MM25-NY	18 Hex	2.25 57.2

## 5/8" FEMALE SQUARE DRIVE SOCKET, MAGNETIC, METRIC

Part Number	Fastener End Size MM. Shape	Overall Length IN. MM.
NC-M-18MM16	18 Hex	1.95 49.6

## 3/8" FEMALE SQ. DR. TORX SOCKETS, MAGNETIC

Part Number	Drive Size IN.	Fastener End Size	Overall Length IN. MM.
NC-MTX-3112	3/8	E12	1.3 33.7
NC-MTX-5116-NY	1/2	E16	1.58 40.1
NC-MTX-5118-NY	1/2	E18	1.58 40.1
NC-MTX-5120-NY	1/2	E20	1.58 40.1

## 1/4" FEMALE SQ. DR. TORX SOCKETS, NON-MAGNETIC

Part Number	Fastener End Size	Overall Length IN. MM.
NC-TX-1105	E5	1.08 27.4
NC-TX-1108	E8	1.08 27.4

## 3/8" FEMALE SQ. DR. TORX SOCKETS, NON-MAGNETIC

Part Number	Fastener End Size	Overall Length IN. MM.
NC-TX-3105	E5	1.3 33.7
NC-TX-3106	E6	1.3 33.7
NC-TX-3107	E7	1.3 33.7
NC-TX-3407	E7	1.37 34.9
NC-TXC-2708	E8	4.72 120
NC-TX-3410	E10	1.3 32.9
NC-TX-3112	E12	1.25 31.8
NC-TX-3414	E14	1.33 33.7

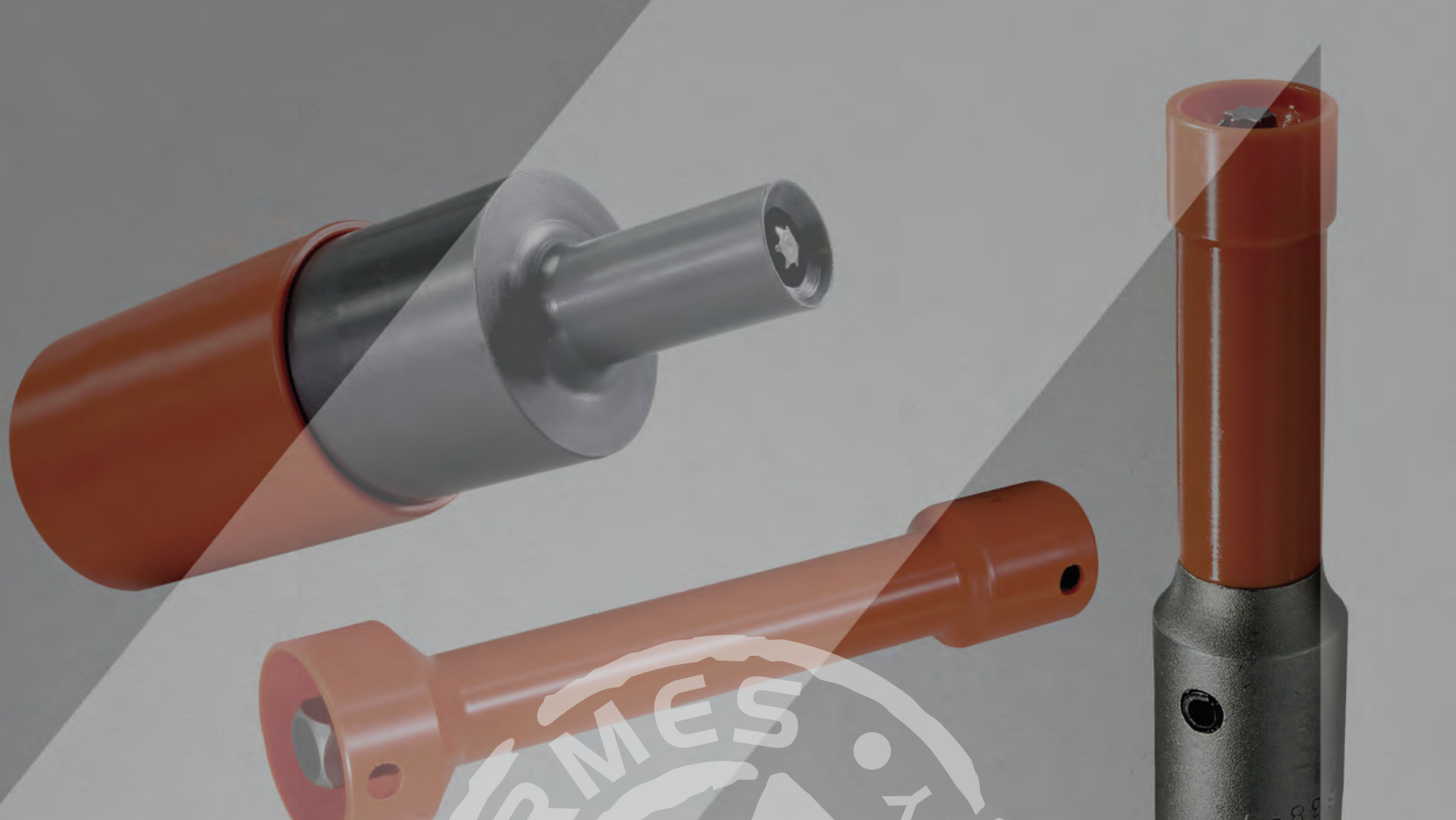
## 1/2" FEMALE SQ. DRIVE TORX SOCKETS, NON-MAGNETIC

Part Number	Fastener End Size	Overall Length IN. MM.
NC-TX-5408	E8	1.55 39.2
NC-TX-5110	E10	1.58 40.1
NC-TX-5112	E12	1.58 40.1
TXNC-5114	E14	1.5 38.1
NC-TX-5414	E14	1.56 39.7
NC-TX-5114	E14	1.58 40.1
NC-TX-5116	E16	1.58 40.1
NC-TX-5118	E18	1.58 40.1
NC-TX-5120	E20	1.58 40.1

## 3/4" FEMALE SQ. DR. TORX SOCKETS, NON-MAGNETIC

Part Number	Fastener End Size	Overall Length IN. MM.
NC-TX-7120	E20	2.08 52.8
NC-TX-7124	E24	2.08 52.8





## CUSTOM SOLUTIONS & SPECIALTY PRODUCTS



// THE INDUSTRY EXPERT IN  
DEVELOPING CUSTOMIZED,  
“HARD-TO-DESIGN” FASTENER  
DRIVE TOOLS TO SOLVE  
OUR CUSTOMERS’ CRITICAL  
FASTENING PROBLEMS.

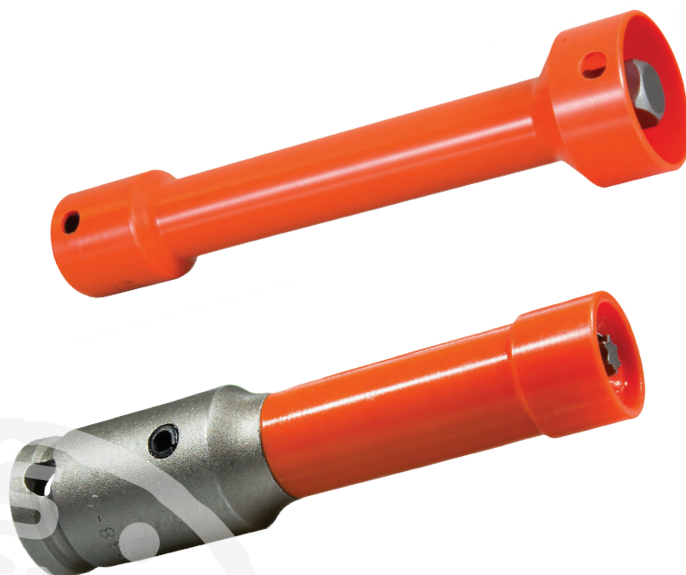
# INNOVATIVE CUSTOM SOLUTIONS

When you have a complex situation on the assembly line or in your MRO facility that cannot be solved by standard drive tools, APEX will solve the problem by designing and developing a custom tool just for your particular need!

For 85 years, industrial customers around the world have relied on APEX to solve their critical fastener drive tool problems. As the world renowned specialist in developing industrial-grade screwdriver bits, impact sockets, and universal wrenches, we design tools to optimize your operations and ensure that your operations run smoothly.

We take great pride in our ability to offer our customers complete tooling solutions that not only meet their requirements, but more often surpass them! Our in-house prototype department backed by a state-of-the-art manufacturing plant puts us in a unique position to deliver a custom tool that will provide outstanding performance consistently - whether it's the first time as a prototype or after it has been supplied to you for many years.

Let us partner with you to develop a custom fastener drive tool designed to optimize your operations and ensure that your assembly line runs smoothly.



## APEX CUSTOM SOLUTIONS ADVANTAGE

### GLOBAL INDUSTRY LEADER

- Recognized as the industry expert in developing customized, "Hard-To-Design" bits, bit holders, sockets, and universal wrenches
- 85 years of experience in solving our customers' critical fastening tool problems
- Thousands of custom products designed for our global customers – chances are that we may have already designed what you are looking for!

### SUPERIOR PRODUCT QUALITY

- Advanced engineering capabilities, proprietary raw materials, and consistent manufacturing process leads to superior product quality
- Custom tools designed for greatest strength and longevity considering application constraints and torque requirements
- Our tools outlast competitive tools substantially and greatly reduce your total cost of ownership

### ADVANCED TECHNOLOGY

- Latest solid-modeling and FEA tools used in product design
- 3D-printed prototypes available in plastic to enable customers to confirm dimensions and fit before ordering metal parts
- ISO 9001 / AS9100 certified Quality management system

### SUPPORT WHEN YOU NEED IT

- Dedicated applications specialists to ensure fast turnaround times on Custom Solution inquiries
- 24/7 production – capability to respond in real time and support you in preventing downtime
- Expedited delivery option available



## 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.



## CONTACT OUR APPLICATIONS SPECIALISTS FOR A QUOTE:

Please use any of the following options to get in touch with one of our Applications Specialists and obtain a quick quote.

**Email:** [Contact@APEX-Tools.com](mailto:Contact@APEX-Tools.com)

**Phone:** +49 7363 81-129

**Online inquiry at:** [www.APEX-Tools.com](http://www.APEX-Tools.com)



# REVERSIBLE SOCKETS FOR SAE HEX HEAD SHEET METAL SCREWS

## STANDARD



Part Number	Hex Size IN.	Overall Length IN.	Outside Dia. IN.	Roll Pin Part Number
SW-350	1/4	9/16	3/8	21-S-078-0375
SH-402	13/16	3/4	13/16	21-S-078-0750

## MAGNETIC



Part Number	Hex Size IN.	Overall Length IN.	Outside Dia. IN.	Spring Pin Part Number
MSW-350	1/4	31/32	3/8	21-S-078-0375
MSW-90	1/4	31/32	7/16	21-S-078-0437
MSW-90-B*	1/4	31/32	7/16	21-S-078-0437
MSW-984	5/16	31/32	9/16	21-S-078-0562
MSW-984-B*	5/16	31/32	9/16	21-S-078-0562
MSH-400	3/8	11/8	11/16	21-S-078-0687

\* Tapered ends

## SHANKS FOR REVERSIBLE SOCKETS



Part Number	Male Hex Power Drive IN.	Male Hex Size IN.	Overall Length IN.	Socket Notes
SH-629	1/4	1/4	2	
SH-629-P	1/4	1/4	2	Pin Lock
SH-629-P-4	1/4	1/4	4	Pin Lock
SH-629-5	1/4	1/4	5	
SH-629-6	1/4	1/4	6	
SH-57	1/4	1/4	2	Full Length Hex
SH-57-3	1/4	1/4	3	Full Length Hex
SH-57-4	1/4	1/4	4	Full Length Hex
SH-57-6	1/4	1/4	6	Full Length Hex
SH-57-8	1/4	1/4	8	Full Length Hex
SH-59	1/4	5/16	2	
SH-59-3	1/4	5/16	3	
SH-59-4	1/4	5/16	4	
SH-59-6	1/4	5/16	6	
SH-414	1/4	1/2	2	
SH-412	1/4	3/8	2	
SH-404	7/16	3/8	2	

# VALVE STEM DRIVERS

## 1/4" MALE HEX DRIVE



Part Number	Slot Size	Overall Length IN.	MM.	Body Dia. IN.	MM.
SD-3138	.083	2.500	63.5	0.178	4.5
SD-5187	.083	2.500	63.5	0.178	4.5
SD-5073	.087	1.750	44.4	0.181	4.6
SD-5197	.095	1.680	42.7	0.187	4.7

# TAP HOLDING SOCKETS

## MALE HEX DRIVE, SAE



Part Number	Male Hex Size IN.	Tap Size IN.	Socket Length: IN.	MM.	Socket Dia. IN.	MM.
SJ-935-1/4	7/16	1/4	15/16	24	5/8	16
SJ-935-5/16	1/2	5/16	15/16	24	5/8	16
SJ-935-3/8 FS	9/16	3/8	1	25	21/32	17
SJ-935-7/16	5/8	7/16	1	25	3/4	19
SJ-935-1/2	3/4	1/2	1 1/4	32	7/8	22

## MALE HEX DRIVE, METRIC



Part Number	Male Hex Size MM.	Tap Size IN.	M	Socket Length IN.	MM.	Socket Dia. IN.	MM.
SJ-935-8MMX5	8	-	M5	15/16	24	5/8	16
SJ-935-10MMX6	10	-	M6	15/16	24	5/8	16
SJ-935-12MMX8	12	-	M8	15/16	24	5/8	16
SJ-935-14MX7/16	14	7/16	-	1	25	21/32	17
SJ-935-14MXM10	14	-	M10	1	25	21/32	17
SJ-935-17MXM8	17	-	M8	1	25	13/16	21
SJ-935-17MXM12	17	-	M12	1	25	13/16	21

Note:

APEX does not stock the parts listed in this section.

# TAP HOLDING SOCKETS

## FEMALE SQUARE DRIVE, SAE



Part Number	Female Square IN.	Tap Size IN.	Socket Length IN. MM.		Socket Dia. IN. MM.	
HC-100-10	3/8	#10	11/2	38	3/4	19
HC-100-1/4	3/8	1/4	11/2	38	3/4	19
HC-100-5/16	3/8	5/16	11/2	38	3/4	19
HC-100-3/8 FS	3/8	3/8	11/2	38	3/4	19
HC-100-7/16	3/8	7/16	11/2	38	3/4	19
HC-100-1/2	3/8	1/2	11/2	38	3/4	19
HC-100-5/8	3/8	5/8	13/4	46	1	25
HC-100-3/4	3/8	3/4	2	51	1	25
HE-100-1/4	1/2	1/4	11/2	38	7/8	22
HE-100-5/16	1/2	5/16	11/2	38	7/8	22
HE-100-3/8 FS	1/2	3/8	11/2	38	7/8	22
HE-100-7/16	1/2	7/16	11/2	38	7/8	22
HE-100-1/2	1/2	1/2	15/8	41	7/8	22
HE-100-5/8	1/2	5/8	13/4	46	1	25
HE-100-3/4	1/2	3/4	2	51	1	25

# DRILL HOLDERS

## 1/4" MALE HEX DRIVE



Part Number	Drill Size IN.	Overall Length IN. MM.		Body Dia. IN. MM.	
WJ-284-11	#11	2 5/8	67	3/4	19
WJ-284-30	#30	2 5/8	67	5/8	16
WJ-284-7/64	7/64	2 5/8	67	1/2	13
WJ-284-1/8	1/8	2 5/8	67	5/8	16
WJ-284-9/64	9/64	2 5/8	67	5/8	16
WJ-284-5/32	5/32	2 5/8	67	3/4	19
WJ-284-3/16	3/16	2 5/8	67	3/4	19
WJ-284-1/4	1/4	2 5/8	67	3/4	19
WJ-284-5/16	5/16	2 5/8	67	3/4	19
WJ-284-3/8	3/8	2 5/8	67	1	25

## 7/16" MALE HEX DRIVE



Part Number	Drill Size IN.	Overall Length IN. MM.		Body Dia. IN. MM.	
WJ-265-3/16	3/16	2 3/8	60	3/4	19
WJ-265-13/64	13/64	2 3/8	60	3/4	19
WJ-265-1/4	1/4	2 3/8	60	3/4	19
WJ-265-3/8	3/8	2 3/8	60	1	25
WJ-265-7/16	7/16	2 3/8	60	1	25
WJ-265-1/2	1/2	2 3/8	60	1 1/8	29
WJ-265-17/32	17/32	2 3/8	60	1 1/8	29

# GREASE FITTING SOCKETS

## FOR ANGLED GREASE FITTINGS, DEEP AND SHALLOW BROACH DEPTH



Part No. 6 Point	Part No. Mag.	Hex Size IN.	Square Drive IN.	Overall Length IN. MM.		Broach Depth IN. MM.		Magnet Depth IN. MM.	
ZN-112	-	3/8	1/4	11/4	32	9/16	14	-	-
ZN-312	MZN-312	3/8	3/8	11/2	38	9/16	14	7/32	6
ZN-512	-	3/8	1/2	11/2	32	9/16	14	-	-
ZN-114	-	7/16	1/4	11/4	32	7/16	11	-	-
ZN-314	MZN-314	7/16	3/8	11/2	38	7/16	11	7/16	11
ZN-514	MZN-514	7/16	1/2	11/2	38	7/16	11	7/16	11
ZE-112	-	3/8	1/4	11/4	32	1/8	3	-	-
ZE-314	-	7/16	3/8	11/2	38	3/16	5	-	-
ZE-514	-	7/16	1/2	11/2	38	3/16	5	-	-

## FOR STRAIGHT GREASE FITTINGS



Part No. 6 Point	Part No. Mag.	Hex Size IN.	Square Drive IN.	Overall Length IN. MM.		Broach Depth IN. MM.		Magnet Depth IN. MM.	
ZA-110	MZA-110	5/16	1/4	1	25	1/8	3	21/64	8
ZA-310	MZA-310	5/16	3/8	11/4	32	1/8	3	21/64	8
ZA-510	MZA-510	5/16	1/2	11/2	38	1/8	3	19/64	7
ZA-512	-	3/8	1/2	11/2	38	1/8	3	-	-
ZA-314	MZA-314	7/16	3/8	11/4	32	3/16	5	23/64	9
ZA-514	MZA-514	7/16	1/2	11/2	38	3/16	5	3/8	10

# #5 (1 5/8") SPLINE DRIVE

## EXTENSIONS



Part Number	Overall Length: IN. MM.		Description
EXL-15	15	381	Female spline to male spline

## ADAPTERS



Part Number	Description
EXL-1000	Female spline to 1" male square
EXL-1100	Female spline to 1 1/2" male square



# #5 (1 5/8") SPLINE DRIVE

## UNIVERSAL WRENCHES



**Part Number**      **Description**

MFL-250	Female spline to male spline (heavy duty)
MFL-1000	Female spline to 1" male square

# BUDD WHEEL SOCKETS



**Part Number**      **Drive Size**      **Overall Length: IN. MM.**      **Hex Opening**

BW-748	3/4" Square	3 3/8	85.7	Combo. 13/16" Square, 1 1/2" Hex
BW-848	1" Square	3 3/8	85.7	Combo. 13/16" Square, 1 1/2" Hex
BW-156	1" Square	4	101.6	Combo. 15/16" Square, 1 3/4" Hex
VH-1-41MM	1" Square	4	101.6	Combo. 13/16" Square, 14 mm Hex
BW-8626	1" Square	2 1/8	54	13/16" Square
BW-848-F	1" Square	3 3/4	95	Combo. 13/16" Square, 1 1/2" Hex for Mag Wheels
HT-848	#5 Spline	3 13/16	96.8	Combo. 13/16" Square, 1 1/2" Hex
HT-1548-D	#5 Spline	4	101.6	1 1/2" Double Hex

# FERRY CAP SOCKETS



## 3/8" SQUARE DRIVE

**Part Number**      **Head Size**      **Overall Length IN. MM.**      **Nose Dia. IN. MM.**      **Drive Dia. IN. MM.**

FC-310	5/16	1 1/4	31.75	15/32	11.9	5/8	15.9
FC-312	3/8	1 1/4	31.75	9/16	4.3	3/4	19.0

# SPARK PLUG SOCKETS



## 3/8 SQUARE DRIVE - SAE

Part Number	Hex Opening IN.	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
HC-3520*	5/8	2 1/2	0.8700	0.8700
SWMHCSF-7320	5/8	2 1/2	0.86	0.8640
WJ-1680-A	7/8	3 1/2	1.10	1.10
WJ-1680-B	7/8	3 1/2	1.10	1.10

\* Double hex

## 3/8 SQUARE DRIVE - METRIC

Part Number	Hex Opening MM.	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
MVC-265-14MM	14	75	22	22
VC-270-14MM	14	165	17	24
MVC-272-14MM	14	178	20	24
VC-271-14MM	14	178	20	24
VCCB-280-14MM-D*	14	180	18	20
MVC-262-14MM-8.75	14	222	21	22
VCFL-118-16MM	16	76	21	24
VC-112-16MM-D*	16	76	24	24
VCFL-107-16MM	16	76	24	24
NCVCFL-107-16MM	16	78	29	29
SWMVCSF-114-16MM	16	80	22	22
VCFL-119-16MM	16	127	21	24
VCFL-120-16MM	16	127	24	24
VCFLNC-121-16MM	16	146	21	27
MVC-116-16MM	16	178	21	24
MVC-117-16MM	16	178	21	24
VC-115-16MM	16	178	21	24

\* Double hex

## 1/2 SQUARE DRIVE - METRIC

Part Number	Square Drive Size IN.	Hex Opening MM.	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
SWMVESF-122-16MM	1/2	16	80	22	22
SWMVESFNC-122-16MM	1/2	16	82	25	25

# LUG NUT SOCKETS



## 5/8" MALE HEX DRIVE, METRIC

Part Number	Male Hex Dr. Sz.	Hex Opening MM.	Overall Length MM.	Dia. Nose End MM.	Dia. Drive End MM.	Opening Depth MM.
VPSFNC-1-19MM	5/8	19	97	29.7	34.7	19.1
VPSFNC-1-22MM	5/8	22	97	34.8	29.6	19.1

## 5/8" SQUARE DRIVE, METRIC

Part Number	Male Square Dr. Sz.	Hex Opening MM.	Overall Length MM.	Dia. Nose End MM.	Dia. Drive End MM.	Opening Depth MM.
VFSFNC-140-19MM-NY	5/8	19	59.4	29.7	29.7	15.9
VFSFNC-135-19MM	5/8	19	58.1	30.0	30.0	15.9

## 3/4" SQUARE DRIVE, SAE

Part Number	Male Square Dr. Sz.	Hex Opening IN.	Overall Length IN.	Dia. Nose End IN.	Dia. Drive End IN.	Opening Depth IN.
HGSFNC-3028	3/4	7/8	4	1.28	1.5	0.875
HGSFNC-3328	3/4	7/8	4	1.4	1.5	0.35

# DOUBLE ENDED BITS



## 1/4" HEX INSERT BITS

Part Number	Point Shape	Size #	Overall Length IN.
441PIS	Phillips - Slotted	#1   4F-5R	1 1/4
442P2P	Phillips - Phillips	#2   #2	1 1/4
442P3S	Phillips - Slotted	#2   8F-10R	1 1/4
SD-5586	Torx - Torx	T30   T30	1 3/8

## 1/4" HEX POWER DRIVE

Part Number	Point Shape	Size #	Overall Length	
			IN.	MM.
49J-2P2P-100MI	Phillips - Phillips	#2   #2	3.9	100
49J-2P2P-100MR	Phillips - Phillips	#2   #2	3.9	100
49J-2P2P-150MR	Phillips - Phillips	#2   #2	3.9	100
49J-2P2P-160MR	Phillips - Phillips	#2   #2	6.3	160
49J-2P2P-50MMI	Phillips - Phillips	#2   #2	2.0	50
49J-2P2P-50MMR	Phillips - Phillips	#2   #2	2.0	50
49J-2P2P-65MMR	Phillips - Phillips	#2   #2	2.6	65
49J-2P2P-75MMI	Phillips - Phillips	#2   #2	3.0	75
49J-2P2P-75MMR	Phillips - Phillips	#2   #2	3.0	75
49J-2P2P-8I	Phillips - Phillips	#2   #2	8.0	203
SD-5482	Hex - Hex	1/4"   1/4"	6.0	152
SD-5522	Torx - Torx	T-20   T-20	3.9	100
SD-5522-T25-T25	Torx - Torx	T-25   T-25	3.9	100
SD-5522-T30-T30	Torx - Torx	T-30   T-30	3.9	100
SD-5597-2P-5MM-6	Cruciform - Hex	#2   5 mm	6.0	152
SD-5597-2P-5MM-8	Cruciform - Hex	#2   5 mm	8.0	203
SD-5597-2P-T30-6	Cruciform - Torx	#2   T-30	6.0	152
SD-5597-2P-T30-8	Cruciform - Torx	#2   T-30	8.0	203
SD-5621	Slotted - Slotted	6F-8R   6F-8R	2.75	70
SD-5759	Hex - Hex	6 mm   6mm	3.9	100

# MARKER SOCKETS



## 3/8" SQUARE DRIVE

Part Number	Hex Opening MM.	Overall Length MM.
WJ-1268-8MM	8	169.2
WJ-1268-10MM	10	169.2
WJ-1268-12MM	12	169.2
WJ-1268-14MM	14	169.2

## 1/2" SQUARE DRIVE

Part Number	Hex Opening MM.	Overall Length MM.
WJ-1268-12MM-1-2	12	169.2
WJ-1268-14MM-1/2	14	169.2
WJ-1268-16MM-1-2	16	169.2
WJ-1268	17	202.2
WJ-1268-19MM-D*	19	203.2
WJ-1268-19MM	19	203.2

\*Double Hex

# SOCKET RETAINING RINGS

## PLASTIC RING WITH STEEL INSERT



Part Number	Drive Size	Inside Dia.	
		IN.	MM.
10005S	3/4" Square	11/4	31.8
10032S	3/4" Square	17/16	36.5
10034S	3/4" Square	15/8	41.3
10008S	1" Square	13/4	44.5
10010S	1" Square	2	50.8
10015S	1" Square	21/8	54.0
10016S	1" Square	21/4	57.2
10017S	1" Square	21/2	63.5
10019S	1" Square	25/8	66.7
10020S	1 1/2" Square	27/8	73.0
10025S	1 1/2" Square	33/8	85.7

## METAL RING



Part Number	Drive Size	Inside Dia.	
		IN.	MM.
MET-1301C	3/8" Square	.677	17.2
MET-1302C	3/8" Square	.771	19.6
MET-1401C	1/2" Square	.855	22.5
MET-1402C	1/2" Square	1.086	27.6
MET-1600C	3/4" Square	1.594	40.5
MET-1800C	1" Square	1.948	49.5

# ADAPTERS

## #130-A YANKEE DRIVE FOR SPIRAL TYPE DRIVER



Part Number	Male Square IN.	Overall Length		Shank Dia.	
		IN.	MM.	IN.	MM.
YK-250	1/4	1 15/16	49	.277	7.0
YK-370	3/8	2 3/16	56	.277	7.0
YK-500	1/2	2 5/16	59	.277	7.0

## #131-A YANKEE DRIVE FOR SPIRAL TYPE DRIVER



Part Number	Male Square IN.	Overall Length		Shank Dia.	
		IN.	MM.	IN.	MM.
YK-501	1/2	2 5/16	59	.310	8.0

# ADAPTERS

## #135-A YANKEE DRIVE FOR SPIRAL TYPE DRIVER



Part Number	Male Square IN.	Overall Length		Shank Dia.	
		IN.	MM.	IN.	MM.
YK-252	1/4	1 15/16	49	.215	5.5
YK-372	3/8	2 3/16	56	.215	5.5
YK-502	1/2	2 5/16	59	.215	5.5

## FEMALE THREADED ADAPTERS



Part Number	Female Thread IN.	Male Square IN.	Type of Lock
TH-257	3/8"-24	1/4	Pin
TH-377	3/8"-24	3/8	Pin
TH-501	3/8"-24	1/2	Pin
TH-378	1/2"-20	3/8	Pin
TH-502	1/2"-20	1/2	Pin

## MALE THREADED ADAPTERS



Part Number	Male Thread IN.	Hex Drive IN.
TM-20	1/2"-20	1/4
TM-24	3/8"-24	1/4
TN-20	1/2"-20	7/16
TN-24	3/8"-24	7/16

# BALL END HEX BITS



## 1/4" HEX INSERT BITS

Part Number	Hex Size IN. MM.	Overall Length IN. MM.
185-000X-BH-4.25	3/64 -	4 1/4 107.95
185-00X-BH-4.5	1/16 -	4 1/2 114.30
185-0X-BH-4.5	5/64 -	4 1/2 114.30
185-1X-BH-6.25	3/32 -	6 1/4 158.75
AM-6MM-BH-165M	- 6	6 1/2 165.00
AM-6MM-BH-255M	- 6	10 254.00

## 1/4" HEX POWER DRIVE

Part Number	Hex Size IN. MM.	Overall Length IN. MM.
AM-05-BH-9	5/32 -	9 228.60
AM-3MM-BH-4	- 3	4 101.60
AM-4MM-BH-4	- 4	4 101.60
AM-5MM-BH-4	- 5	4 101.60
SD-5536-BH	3/32 -	4 5/8 117.48
SD-5537-BH	5/64 -	5 1/4 133.35
SD-5609-7-64-BH	7/64 -	6 152.40
SD-5630-2.5MM-BH	- 5	4 101.60
SD-5734-BH	7/64 -	5 127.00
SD-5786-BH	5/32 -	3 1/2 88.90
SD-5160	5/32 -	5 1/3 135.20

## 5/16" HEX INSERT BITS

Part Number	Hex Size MM.	Overall Length IN. MM.
315-6MM-BH-3	6	3 76.20
315-8MM-BH-3	8	3 76.20
315-10MM-BH-3	10	3 76.20

## 3/8" HEX INSERT BITS

Part Number	Hex Size MM.	Overall Length IN. MM.
SD-5814-4M-4-BH	4	4 101.60
SD-5814-6M-4-BH	6	4 101.60

## 7/16" HEX INSERT BITS

Part Number	Hex Size IN. MM.	Overall Length IN. MM.
SD-5809-10M-4-BH-B	- 10	2 7/8 73.03
SD-5809-10M-6-BH-B	- 10	4 7/8 123.83
SD-5809-10M-8-BH-B	- 10	6 7/8 174.63
SD-5809-8M-4-BH-B	- 8	2 7/8 73.03
SD-5814-4M-4-BH-B	- 4	3 1/8 79.38
SD-5814-6M-4-BH-B	- 6	3 1/8 79.38
SZ-19-A-BH	5/8 -	1 3/8 34.93
SZ-7-10MM-BH	- 10	1 3/8 34.93
SZ-7-6MM-BH	- 6	1 3/8 34.93
SZ-7-6MM-BH-1125	- 6	1 1/8 28.58
SZ-7-6MM-BH-1375	- 6	1 3/8 34.93
SZ-7-6MM-BH-2375	- 6	2 3/8 60.33
SZ-7-8MM-BH	- 8	1 3/8 34.93

## 7/16" HEX POWER DRIVE

Part Number	Hex Size IN. MM.	Overall Length IN. MM.
AN-6MM-BH-80M	- 6	3 1/64 76.60
AN-8MM-BH	- 8	3 1/2 88.90
SD-5790-BH	15/64 -	3 1/64 76.60

## 1/2" HEX SERVICE DRIVE

Part Number	Hex Size MM.	Overall Length IN. MM.
SD-5809-10M-4-BH	10	4 101.60
SD-5809-10M-6-BH	10	6 152.40
SD-5809-10M-8-BH	10	8 203.20
SD-5809-8M-4-BH	8	4 101.60

## 5/8" HEX INSERT BITS

Part Number	Hex Size MM.	Overall Length IN. MM.
SD-5810-12M-4-BH-B	12	3 76.20
SD-5810-12M-6-BH-B	12	5 127.00
SD-5810-12M-8-BH-B	12	7 177.80
SD-5810-14M-4-BH-B	14	3 76.20
SD-5810-14M-8-BH-B	14	7 177.80
SZ-10-17MM-BH	17	1 9/16 39.67
SZ-10-18MM-BH-3750	18	3 3/4 95.25

## 3/4" SQUARE SERVICE DRIVE

Part Number	Hex Size MM.	Overall Length IN.	MM.
SD-5810-12M-4-BH	12	4	101.60
SD-5810-12M-6-BH	12	6	152.40
SD-5810-12M-8-BH	12	8	203.20
SD-5810-14M-4-BH	14	4	101.60
SD-5810-14M-8-BH	14	8	203.20

## BARBELL SOCKETS



## 3/8" FEMALE SQUARE DRIVE

Part Number	Hex Opening MM.	Overall Length IN.	MM.	Nose End Dia. MM.	Drive End Dia. MM.
RMBVC-272-12MM-D*	12	2.0	50.8	0.63	0.71
MBVC-41-12MM-B	12	7.8	196.9	0.75	0.71
MBVC-41-12MM-A	12	6.0	152.4	0.75	0.71
MVCCBC-284-12MM-9	12	9.0	228.6	0.75	0.75
MBVC-41-12MM	12	4.5	115.0	0.75	0.75
VCSF-27-14MM-200M	14	7.9	200.0	0.88	0.88
MBVCCBC-249-14MM-8	14	8.0	203.2	0.87	0.84
MVCCBC-248-14MM-4	14	4.0	101.6	0.87	0.87
VC-27-14MM	14	5.7	145.0	0.88	0.88
MVCFL-147-15MM	15	5.9	150.7	0.75	0.89

\* Double hex

## 1/2" FEMALE SQUARE DRIVE

Part Number	Hex Opening IN.	MM.	Overall Length IN.	MM.	Nose End Dia. MM.	Drive End Dia. MM.
HE-334-A-7	1 1/4	-	7	187.5	1.12	1.75
VESF-54-8MM	-	8	3.3	82.6	0.81	0.55
VE-6-14M-200M	-	14	7.9	200.0	0.98	0.82
VE-27-14MM-150M	-	14	6.3	160.1	1.00	0.87
MBVE-338-14MM	-	14	5.9	150.0	0.94	0.88
VE-15-30MM	-	30	6.0	152.4	1.13	1.63

## 3/4" FEMALE SQUARE DRIVE

Part Number	Hex Opening IN.	MM.	Overall Length IN.	MM.	Nose End Dia. MM.	Drive End Dia. MM.
HG-6840	1 1/4	-	6.0	152.4	1.75	1.75
HG-6940	1 1/4	-	6.0	152.4	1.75	1.75
HG-334-A-7	1 1/4	-	7.6	193.0	1.50	1.75
VG-64-21MM	-	21	10.0	254.0	1.38	1.38

## COMBINATION SOCKETS



## 1/4" SQUARE DRIVE

### BIT WITHIN A SOCKET, SAE

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
HA-10110XT40	5/16	T40 Torx	2 3/16	1/2	1/2

## 1/4" HEX DRIVE

### NUTSETTERS WITH BITS

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length MM.	Nose End Dia. MM.
SWMVM-10-7MX2QD*	7	#2 Quadrex	99.2	12.7
SWMVM-22-8MX2QD*	8	#2 Quadrex	99.2	12.7

\* Features sidewall magnets

## 3/8" SQUARE DRIVE

### SOCKET WITHIN A SOCKET, METRIC

Part Number	Hex Opening Sizes and Styles (Standard Hex Unless Noted)	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
VC-76-8M-12M	8mm, 12mm	38.1	19.1	19.1
MRVC-309-10MM**	10 mm, 7 mm	31.8	16.7	19.1
VC-612-10MX8M	10mm, 8mm	44.5	19.1	19.1
VCNC-843-10MX8M***	10mm, 8mm	40.1	22.2	22.2
VCSF-799-10M8M	SF-10mm, SF-8mm*	72.6	16.5	19.1
VC-274-12M-10M	12mm, 10mm	50.8	20.6	20.6
VC-321-12MX10M	12mm, 10mm	146.1	19.1	19.1
VC-679-13MMX8EP	13mm, EP8 Torx Plus	57.2	20.6	20.6
VC-681-13MMX5MM	13mm, 5mm	101.6	22.2	22.2
VCSF-418-13MM	13mm, SF-10mm*	63.5	20.6	20.6
VCSF-419-13MM	SF-13mm, 10mm*	68.2	20.6	20.6
VC-287-14MX10M	14mm, 10mm	63.5	22.2	22.2
VC-130-15M10M	15mm, 10mm	88.9	22.2	22.2
VE-326-15MM-13MM	15mm, 13mm	73.0	23.8	23.8
VC-150-15MX13M	15mm, 13mm	70.6	22.2	22.2
VC-159-15MX13M	15mm, 13mm	84.1	22.2	22.2
VC-295-17MX12M	17mm, 12mm	74.7	25.4	25.4
VC-291-17MX13M	17mm, 13mm	82.6	25.4	25.4
VC-37-19M14M	19mm, 14mm	69.9	28.6	28.6
VCSF-110-16MX24M	SF-24mm, SF-16mm*	162.3	31.8	30.0

\* SF=Surface drive hex; \*\* Magnetic; \*\*\* Free spinning non-mar cover



# COMBINATION SOCKETS

## 3/8" SQUARE DRIVE

### BIT WITHIN A SOCKET, METRIC

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
VCNC-844-10MXT30**	10	T-30 Torx	59.1	22.2	22.2
VC-613-10MXT40	10	T-40 Torx	53.7	16.7	19.1
VCSF-131-11MXT30*	SF-11	T-30 Torx	52	14.9	19.1
VC-282-14MXT50	14	T-50 Torx	82.6	22.2	22.2
VE-154-19MM-6MM	19	6mm Hex	111.1	28.6	28.6

\* SF=Surface drive hex; \*\* Free spinning non-mar cover

## 3/8" SQUARE DRIVE

### BIT WITHIN A SOCKET, SAE

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
HC-1030	15/16	5/16 Hex	4 1/4	1 1/4	1 1/4
HC-1230	15/16	5/16 Hex	5 3/4	1 1/4	1 1/4

## 1/2" SQUARE DRIVE

### SOCKET WITHIN A SOCKET, METRIC

Part Number	Hex Opening Sizes and Styles (Standard Hex Unless Noted)	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
VE-368-13M10M	13mm, 10mm	82.6	22.2	23.8
MVE-332-14MX12M**	14mm, 12mm	63.5	22.2	23.8
VE-333-14MX12M	14mm, 12mm	63.5	22.2	23.8
VE-260-14MD-E10	14mm Double Hex, E10 Torx	97	22.7	25
VE-331-15M13M	15mm, 13mm	82.6	23.8	23.8
VE-360-17MX14M	17mm, 14mm	66.7	28.6	28.6
VESF-106-17MX13M-D	17mm, 13mm Double Hex	76.2	25.4	25.4
VE-382-17MX14M	17mm, 14mm	66.7	25.4	25.4
VE-115-18MX13M	18mm, 13mm	76.2	28.6	28.6
VE-116-18MX15M	18mm, 15mm	77.8	28.6	28.6
VENC-117-18MXE14***	18mm, E14 Torx	92.1	28.6	28.6
VESF-332-15M13M*	SF-18mm, SF-13mm	82.6	21	21
VE-84-22MX19M	22mm, 19mm	82.6	29.8	29
VESF-78-22MM-19MM*	SF-22mm, SF-19mm	48	33.8	28
VENC-27-27MX24M***	27mm, 24mm	84.5	44.5	44.5
VE-14-30MX18M	30mm, 18mm	95.3	44.5	44.5

\* SF=Surface drive hex; \*\* Magnetic; \*\*\* Free spinning non-mar cover

## 1/2" SQUARE DRIVE

### SOCKET WITHIN A SOCKET, SAE

Part Number	Hex Opening Sizes and Styles (Standard Hex Unless Noted)	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
HESF-26318-E10*	SF-9/16", E10 Torx	2 1/4	15/16	15/16
HESF-4432*	SF-1", SF-15/16	2 1/4	13/8	13/8

\* SF=Surface drive hex

## 1/2" SQUARE DRIVE

### BIT WITHIN A SOCKET, METRIC

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
VE-120-12MXTSQ10M	12 Hex	10mm Triple Square	69.9	22.2	23.8
VE-120-12MXTSQ12M	12 Hex	12mm Triple Square	69.9	22.2	23.8
VE-331-13MM-T50	13 Hex	T50 Torx	82.6	19.1	23.8
VESF-132-15MX10M*	SF-15	10mm Hex	133.4	25.4	25.4
VE-131-16MX8M	16 Hex	8mm Hex	82	23.9	23.9
VE-214-17MM-D	17 Double Hex	T55 Torx	130	30	28.6
VE-369-17MM-D-T55	17 Double Hex	T55 Torx	88.8	28.6	28.6
VE-371-17MM-D-T55	17 Double Hex	T55 Torx	102.2	28.6	28.6
VE-381-17MM-D-T55	17 Double Hex	T55 Torx	188.3	28.6	28.6
VE-120-18MX8M	18 Hex	8mm Hex	158	24	24

\* SF=Surface drive hex

## 3/4" SQUARE DRIVE

### SOCKET WITHIN A SOCKET, SAE

Part Number	Hex Opening Sizes and Styles (Standard Hex Unless Noted)	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
MBVA-6-12MM10MM**	12mm, 10mm	44.5	19.1	19.1
VGNC-129-18MXE14***	18mm, E14 Torx	103.6	28.6	37.2
VG-66-21MX18M	21mm, 18mm	101.6	33.0	33.0
VG-76-24MX14M	24mm, 14mm	101.6	38.1	38.1

\*\* Magnetic; \*\*\* Free spinning non-mar cover

## 3/4" SQUARE DRIVE

### BIT WITHIN A SOCKET, METRIC

Part Number	Hex Opening IN.	Bit Size and Type	Overall Length MM.	Nose End Dia. MM.	Drive End Dia. MM.
VGSF-31-15MX10M*	SF-15	10mm Hex	133.4	25.4	38.1
VGSF-77-21MX12M*	SF-21	21mm Hex	158.8	38.1	38.1

\* SF=Surface drive hex

# COMBINATION SOCKETS

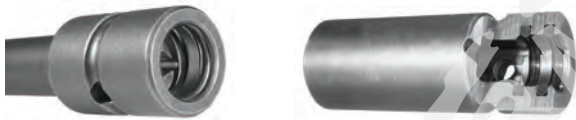
## 1" SQUARE DRIVE

### SOCKET WITHIN A SOCKET, SAE

Part Number	Hex Opening Sizes and Styles (Standard Hex Unless Noted)	Overall Length IN.	Nose End Dia. IN.	Drive End Dia. IN.
VH-27-27MX22M	27mm, 22mm	108.0	47.6	41.3
VHSF-2-38MM-33MM*	SF-38mm, SF-33mm	95.3	57.2	57.2
HHSF-8148-33MM*	1 1/2", SF-33mm	95.3	60.3	60.3
HHSF-10748-33MM*	1 1/2", SF-33mm	108.0	60.3	60.3

\* SF=Surface drive hex

# COUNTER-BORED TOOLS



APEX offers sockets and extensions with counter-bores machined on the drive end of the socket/ extension. Benefits to the user are improved axial alignment between the power tool and socket/extension, improved torque transfer, and ergonomic benefits to the operator due to reduced vibrations.

## 3/8" SQUARE DRIVE

Part Number	Tool Type	Fastener End Type	Fastener End Size IN. MM.	Overall Length IN. MM.
HC-8612-2	Extension: Pin Lock	Square	3/8 -	2 -
HC-8612-4	Extension: Pin Lock	Square	3/8 -	4 -
HC-8612-6	Extension: Pin Lock	Square	3/8 -	6 -
HC-8612-8	Extension: Pin Lock	Square	3/8 -	8 -
MBVC-41-12MM-B	Barbell Socket Magnetic	Hex	- 12	- 197
MVCCBC-284-12MM-5	Barbell Socket Magnetic	Hex	- 12	- 127
MVCCBC-284-12MM-9	Barbell Socket Magnetic	Hex	- 12	- 229
MBVCCBR323-12M120M	Barbell Socket Magnetic	Hex	- 12	- 120
MBVC-41-12MM	Barbell Socket Magnetic	Hex	- 12	- 115

## 1/2" SQUARE DRIVE

Part Number	Tool Type	Fastener End Type	Fastener End Size IN. MM.	Overall Length IN. MM.
MVECBU-131-12MM	Socket Magnetic	Hex	- 12	- 115
WE-4516-4	Extension: Pin Lock	Square	1/2 -	4 -
WE-4516-6	Extension: Pin Lock	Square	1/2 -	6 -

## 5/8" SQUARE DRIVE

Part Number	Tool Type	Fastener End Type	Fastener End Size MM.	Overall Length MM.
MVFCB-137-19MM	Socket Magnetic	Hex	19	48
MVFCB-68-17MM	Socket Magnetic	Hex	17	48

# ADAPTERS

## SOCKET & RATCHET WRENCH ADAPTERS, SAE



Part Number	Male Square IN.	Male Hex IN.	Overall Length IN.
A-108	1/4	1/4	25/32
A-110	1/4	5/16	25/32
A-112	1/4	3/8	25/32
A-114	1/4	7/16	25/32
A-116	1/4	1/2	25/32
A-118	1/4	9/16	25/32
A-120	1/4	5/8	25/32
A-312	3/8	3/8	11/64
A-314	3/8	7/16	11/64
A-316	3/8	1/2	15/64
A-318	3/8	9/16	15/64
A-320	3/8	5/8	15/64
A-322	3/8	11/16	15/64
A-324	3/8	3/4	15/64
A-328	3/8	7/8	15/64
A-512	1/2	3/8	13/32
A-514	1/2	7/16	13/32
A-516	1/2	1/2	13/32
A-518	1/2	9/16	13/32
A-520	1/2	5/8	11/8
A-522	1/2	11/16	11/8
A-524	1/2	3/4	11/8
A-526	1/2	13/16	11/8
A-528	1/2	7/8	11/8
A-530	1/2	15/16	11/8
A-534	1/2	11/16	11/8
A-536	1/2	11/8	11/8
A-538	1/2	13/16	11/8
A-540	1/2	11/4	11/8

# ADAPTERS

## SOCKET & RATCHET WRENCH ADAPTERS, METRIC



### SOCKETS WITH MALE HEX



Part Number	Female Square IN.	Male Hex IN.	Overall Length	
			IN.	MM.
SJ-375	5/16	3/8	13/16	21
SJ-349	3/8	7/16	15/16	24
SJ-350	7/16	7/16	15/16	24
SJ-360	3/8	1/2	15/16	24
SJ-361	7/16	1/2	15/16	24
SJ-55	7/16	9/16	15/16	24
SJ-241	1/2	1/2	1	25
SJ-351	1/2	7/16	1	25
SJ-352	9/16	7/16	1	25
SJ-362	9/16	1/2	1	25
SJ-379	1/2	3/8	1	25
SJ-380	9/16	3/8	1	25
SJ-66	1/2	9/16	1	25
SJ-67	9/16	9/16	1	25
SJ-68	5/8	9/16	1 1/8	28
SJ-364	1 1/16	1/2	1 3/16	30

Part Number	Male Square IN.	Male Hex IN.	Overall Length	
			IN.	MM.
A-1-6mm	1/4	6	25/32	20
A-1-7mm	1/4	7	25/32	20
A-1-8mm	1/4	8	25/32	20
A-1-9mm	1/4	9	25/32	20
A-1-13mm	1/4	13	25/32	20
A-3-10mm	3/8	10	15/16	24
A-3-11mm	3/8	11	15/16	24
A-3-12mm	3/8	12	15/16	24
A-3-13mm	3/8	13	15/16	24
A-3-14mm	3/8	14	15/16	24
A-3-15mm	3/8	15	15/16	24
A-3-16mm	3/8	16	15/16	24
A-3-17mm	3/8	17	15/16	24
A-3-18mm	3/8	18	15/16	24
A-3-19mm	3/8	19	15/16	24
A-5-10mm	1/2	10	1 1/8	29
A-5-11mm	1/2	11	1 1/8	29
A-5-12mm	1/2	12	1 1/8	29
A-5-13mm	1/2	13	1 1/8	29
A-5-14mm	1/2	14	1 1/8	29
A-5-15mm	1/2	15	1 1/8	29
A-5-16mm	1/2	16	1 1/8	29
A-5-17mm	1/2	17	1 1/8	29
A-5-18mm	1/2	18	1 1/8	29
A-5-19mm	1/2	19	1 1/8	29
A-5-20mm	1/2	20	1 1/8	29
A-5-21mm	1/2	21	1 1/8	29
A-5-22mm	1/2	22	1 1/8	29
A-5-23mm	1/2	23	1 1/8	29
A-5-24mm	1/2	24	1 1/8	29
A-5-25mm	1/2	25	1 1/8	29

## WSK WOBBLE SOCKET ADAPTER KIT

The APEX WSK can convert any fastener tool with a female square drive (3/8", 1/2", 5/8", 3/4", or 1") and a DIN groove into a Wobble socket. This will enable you to drive fasteners that may have a slight misalignment (up to 10 degrees) between the drive tool axis and the fastener axis. In addition, this will also prove extremely useful in hand-drive operations where clearance may be an issue.

### KEY BENEFITS OF APEX WSK:

- Improves productivity by providing a wobble (or swivel) to any existing socket immediately
- Can be used with standard sockets or application-specific specials
- Corrects misalignment up to 10 degrees
- Reduces cam-out caused by misalignment
- Improves tool life by engaging fastener correctly
- Easy to assemble







# TORQUE SCREWDRIVERS

// APEX TORQUE LIMITING  
SCREWDRIVERS OFFER HIGH  
QUALITY SOLUTIONS FOR A  
VARIETY OF PRECISION TORQUE  
APPLICATIONS. EACH TORQUE  
SCREWDRIVER IS MADE FROM TOP  
GRADE MATERIALS AND MACHINED  
TO EXACTING TOLERANCES  
RESULTING IN PREMIUM  
PERFORMANCE AND DURABILITY.

# TORQUE LIMITING SCREWDRIVERS

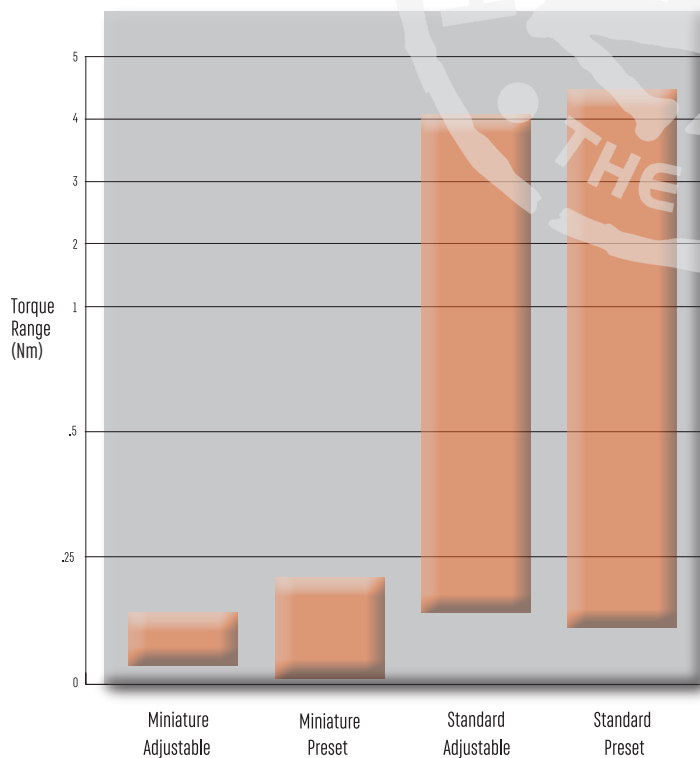
# APEX<sup>®</sup>

## TORQUE LIMITING SCREWDRIVERS INTRODUCTION:

APEX torque limiting screwdrivers offer high quality solutions for a variety of applications. Our torque screwdrivers add value to the assembly process by enabling you to assess, control and improve product reliability, which ultimately leads to customer satisfaction.

APEX offers a complete line of torque limiting screwdrivers covering a range of 2-640 in. oz. Six standard models are available for light duty torque applications including general electronic and computer assembly. Two miniature models offer reliable fastening of the very smallest of applications such as cellular phone assembly.

**Torque Screwdrivers**



*Easy-Release Bit Holder For Fast Bit Changes*



## QUALITY

Electronics assembly and other light screw assembly applications demand precision that can only be accomplished with the use of precision tools. All APEX torque screwdrivers are made of top grade materials machined to exacting tolerances. Working parts are heat treated for added strength and durability. Then, each tool is carefully assembled by our experienced technicians. All APEX torque screwdrivers feature aluminum housings to reduce weight and maximize durability. Our screwdrivers also feature a unique roller bearing cam, which produces smooth, accurate, and consistent performance when tightening fasteners. When the maximum torque setting is achieved, the cam mechanism automatically slips to prevent over-tightening.

Each APEX screwdriver is calibrated according to ASME B107.14M before leaving the plant, using test equipment traceable to NIST (National Institute of Standards and Technology).



In addition to being highly durable, several features have been engineered into APEX torque screwdrivers to increase ease of use. Each of the three standard adjustable models is distinguished by red, blue and black for easy identification. Also, a patented, spring-loaded locking collar locks the scale at the desired torque setting. This helps to prevent the operator from accidentally using the screwdriver in the unlocked position, which may lead to incorrectly tightened fasteners. All models feature a quick-release bit holder, which securely retains the bit during operation, while allowing for easy removal.

Our manufacturing processes are ISO 9001 certified, which means that APEX products are manufactured to the highest quality standards. Quality materials, precision machining and assembly is what makes APEX torque screwdrivers the tool of choice.

## CALIBRATION INTERVALS

Due to the consistent precision accuracy needed while using these products, we recommend calibrating our torque screwdrivers every six months. However, the quality objectives, frequency of application and type of application will ultimately determine how often to calibrate the tool.



*Ground And Tuned Torque Spring For Repeatability And Accuracy*

*Precision Ground Roller Bearing Cam*

*Adjusting Screw*

*All-Aluminum Housing To Reduce Weight And Increase Durability*

[www.APEX-Tools.com](http://www.APEX-Tools.com)

Phone: +49 7363 81-129

[Contact@APEX-Tools.com](mailto:Contact@APEX-Tools.com)

For more details, please refer to the APEX catalog, SP-301, at [www.APEX-tools.com/downloads/service-literature](http://www.APEX-tools.com/downloads/service-literature)



# UNIVERSAL JOINTS

**// SUPERIOR TORQUE  
TRANSFER SOLUTIONS FOR THE  
TOUGHEST APPLICATIONS -  
IN ZERO GRAVITY, AT 25,000  
FEET OR ON THE FACTORY FLOOR.**



# APEX UNIVERSAL JOINTS OVERVIEW



# APEX®

## LESS DOWNTIME, MORE LIFETIME.

APEX has been supplying universal joints for military and commercial applications since 1933. Over these 80+ years we have provided engineered solutions for thousands of demanding applications worldwide. Today APEX is recognized as the “Less downtime, more Lifetime” leader in pin and cube universal joint designs and applications.

## OUR PRIMARY MARKETS ARE:

### GOVERNMENT/MILITARY APPLICATIONS

APEX meets the demanding requirements military applications such as gun systems, remote valve control, Unmanned Aerial Vehicles (UAV), thrust vector control systems, and fan drive universal joints.



### AEROSPACE

Commercial, military, business jets, and private aircraft all utilize APEX universal joints. Typical uses include flap/ slat actuation, “hinges” for cargo doors and windows, mechanical linkages for steering, trim control and door latching mechanisms. APEX double universal joints have even been used to replace gear boxes. These high strength-to-weight ratio universal joints have excellent torsional freewheel (i.e., backlash) characteristics suited to this environment.



## OFF-HIGHWAY/ CONSTRUCTION EQUIPMENT

Applications include steering columns, a variety of mechanical linkages and power take offs. Also included are custom designs for specialty equipment (e.g. fire trucks.)



## PERFORMANCE RACING

Our MS series of universal joints have become the standard by which all other universal joints are measured. The same aerospace design considerations are applicable in this competitive market. Primary uses are for steering, shift linkages, and chassis adjustment applications.



## INDUSTRIAL POWER TRANSMISSION

This represents the most diverse area of applications. Some typical uses are steel leveling equipment, links to conveyor systems, pump drive systems, multiple spindle drill heads, bowling alley pin setters, canning equipment, centerless grinders, bottling machines, industrial sewing machines, control linkages, mixing equipment, packaging machinery, and industrial scales. This list represents only a fraction of the applications where APEX universal joints are used. Our “quick-change” universal joints are extremely popular in this area. They eliminate precision alignment requirements and allow for quick repair of critical machinery and assembly/conveyor lines.

APEX universal joints consistently deliver performance in process industries where continuous operation is the norm and equipment availability/uptime is critical. Whatever your application, you can depend on APEX universal joints to provide rigidity and exceptionally high strength-to-weight ratios with less deflection, superior fatigue resistance and high overload capacity. Add to this APEX'S wide selection of elastomeric covers that seal lubrication in and protect the universal joint from harsh operating environments (e.g., dirt, water, abrasive slurry, etc.), and you have unsurpassed reliability for your application. All of these features can be incorporated into single, double, telescopic, or quick-change universal joints. We specialize in make-to-order products engineered to optimize your application and reduce operating costs. APEX is the Performance Authority for pin-and-cube universal joints.

# APEX UNIVERSAL JOINTS OVERVIEW

## APEX OFFERS A VARIETY OF SOLUTIONS FOR YOUR STANDARD OR CUSTOM APPLICATION

If your application calls for something other than our standard 300 or 400 series universal joints, APEX can provide it for you. Our engineers are ready to solve your application problems.

Some of the options available are:

### ■ UNIVERSAL JOINT CONFIGURATIONS:

In addition to the standard plain bearing design, there is also a "Press Fit" design which improves fatigue life in reverse loading applications. For higher RPMs, we offer a needle bearing line.

### ■ MATERIALS:

Alloy steels (4140, 4150, 4340), Austenitic stainless steel (303, 304, 316, Nitronic 60), Martensitic stainless steel (416, 440C, 13-8, 17-4, 15-5), carbon steel (1020, 8620) and specialty steels (such as Stressproof and S-2 Modified).

### ■ BEARINGS:

APEX utilizes plain, rolling element and polymer bearings in its designs. Selecting the right bearing maximizes the performance the universal joint, minimizes/eliminates maintenance, and increases the life of the universal joint.

### ■ HEAT TREATMENT:

Advanced heat treat, selective through hardening, induction hardening, and case hardening.

### ■ SURFACE TREATMENT:

Light oil, cadmium (electrolytic and vacuum), electrolytic zinc, nickel (electrolytic and electroless), black oxide, phosphate (manganese and zinc), solid film lubricant, and a variety of paint solutions.

### ■ COVER MATERIALS:

Silicone, Nitrile, EPDM, Viton, Neoprene, FDA approved food polymer, vinyl, Silicon/Dacron, Fluoro-Silicon/Nomex.

### ■ COVER STYLES:

Bulbous, flat, and convoluted.

### ■ LUBRICANTS:

High pressure gear oil, "natural" grease, synthetic grease, synthetic grease with additives (improves "dry start" characteristics), non-outgassing grease, food grade grease, graphite powder, and solid film lubricant.

### ■ GEOMETRY:

Square, Hex, Threaded, splines (involute or straightsided), gears, split collar with lug bolt, keyways, precision diameters (.0002"), gears, whistle-notch, and quickrelease. Where applicable, these are available in male or female.



Additionally, multiple features can be combined on the same hub. APEX engineers utilize these options daily to design the product right for your needs. From extreme loading (including seismic) to harsh environments (-80° to 600° F), APEX is your Total Solution Source.

## QUALITY

APEX universal joints are supplied from our Dayton facility which has AS9100 certification. AS9100 is a widely adopted and standardized quality management system for the aerospace industry and incorporates fully the entirety of the current version of ISO 9001.

Our Dayton facility, manufacturing site of APEX Universal Joints, has AS9100 Quality System Certification. The driving force behind the implementation of the Quality System is the commitment "to provide our customers with the best value delivered by offering only products and services that meet or exceed their expectations."



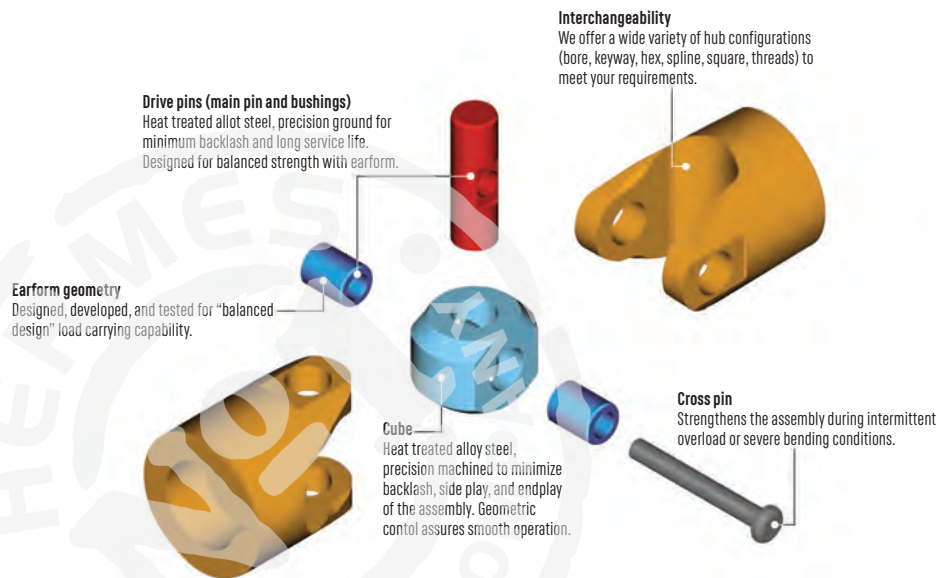


## THE APEX TOTAL SOLUTION DESIGNED INTO EVERY UNIVERSAL JOINT

The illustration below highlights many of the common design features that have made Apex the Market Leader in providing “less downtime, more lifetime” for some of the most demanding applications. At the heart of this success is engineering excellence that created and continues to refine this design to meet the ever increasing challenges of new applications. To further compliment this, add Apex’s manufacturing capabilities and its proprietary heat-treat processes. The result is a “balanced” design that provides the highest strength-to-weight ratio pin and cube universal joint available. It is not uncommon for Apex to outperform the competition by at least 30% in strength for equivalent size products.

### PERFORMANCE FEATURES:

- Efficient operation up to 35° standard (higher operating angles available)
- Designed-in overload capacity for greater reliability. (Temporary torsional overloads up to 80% and axial overloads up to 150% of the rated ultimate capacity can occur without harmful binding.)
- Advanced heat treat of alloy steel maximizes “toughness”
- Available with covers that seal in lubrication and greatly improve service life.



APEX design engineers utilize 3-D solid models and finite element analysis (FEA) to develop and evaluate different design options.



When you bring your applications to APEX, you will be supported by a technical staff that has decades of experience in performing Finite Element Analysis (FEA), 3-D Solid Modeling, Metallurgical analysis, non-destructive testing, functional testing, and prototype production.

For further information please contact us at 1-800-845-5629 or visit us at [www.APEX-tools.com/tools/universal-joints](http://www.APEX-tools.com/tools/universal-joints)

# CONVERSION TABLES

## MILLIMETER – DECIMAL – FRACTION

MM	DEC.	IN.	MM	DEC.	IN.	MM	DEC.	IN.	MM	DEC.	IN.	MM	DEC.	IN.
0.100	.0039		5.159	.2031	13/64	10.200	.4016		15.300	.6024		20.300	.7992	
0.200	.0079		5.200	.2047		10.300	.4055		15.400	.6063		20.400	.8031	
0.300	.0118		5.300	.2087		10.319	.4063	13/32	15.478	.6094	39/64	20.500	.8071	
0.397	.0156	1/64	5.400	.2126		10.400	.4094		15.500	.6102		20.600	.8110	
0.400	.0157		5.500	.2165		10.500	.4134		15.600	.6142		20.638	.8125	13/16
0.500	.0197		5.556	.2188	7/32	10.600	.4173		15.700	.6181		20.700	.8150	
0.600	.0236		5.600	.2205		10.700	.4219		15.800	.6220		20.800	.8189	
0.700	.0276		5.700	.2244		10.716	.4219	27/64	15.875	.6250	5/8	20.900	.8228	
0.794	.0313	1/32	5.800	.2283		10.800	.4252		15.900	.6250		21.000	.8268	
0.800	.0315		5.900	.2323		10.900	.4291		16.000	.6299		21.034	.8281	53/64
0.900	.0354		5.953	.2344	15/64	11.000	.4331		16.100	.6339		21.100	.8307	
1.000	.0394		6.000	.2362		11.100	.4370		16.200	.6378		21.200	.8307	
1.100	.0433		6.100	.2402		11.113	.4375	7/16	16.272	.6406	41/64	21.200	.8346	
1.191	.0469	3/64	6.200	.2441		11.200	.4409		16.300	.6417		21.300	.8386	
1.200	.0472		6.300	.2480		11.300	.4449		16.400	.6457		21.400	.8425	
1.300	.0512		6.350	.2500	1/4	11.400	.4488		16.500	.6496		21.431	.8438	27/32
1.400	.0551		6.400	.2520		11.500	.4528		16.600	.6535		21.500	.8465	
1.500	.0591		6.500	.2559		11.509	.4531	29/64	16.669	.6563	21/32	21.600	.8504	
1.588	.0625	1/16	6.600	.2598		11.600	.4567		16.700	.6575		21.700	.8543	
1.600	.0630		6.700	.2638		11.700	.4606		16.800	.6614		21.800	.8583	
1.700	.0669		6.747	.2656	17/64	11.800	.4646		16.900	.6654		21.828	.8594	55/94
1.800	.0709		6.800	.2677		11.900	.4685		17.000	.6693		21.900	.8622	
1.900	.0748		6.900	.2717		11.906	.4688	15/32	17.066	.6719	43/64	22.000	.8661	
1.984	.0781	5/64	7.000	.2756		12.000	.4724		17.100	.6732		22.100	.8701	
2.000	.0878		7.100	.2795		12.100	.4764		17.200	.6772		22.200	.8740	
2.100	.0827		7.144	.2813	9/32	12.200	.4803		17.300	.6811		22.225	.8750	7/8
2.200	.0866		7.200	.2835		12.300	.4843		17.400	.6850		22.300	.8780	
2.300	.0906		7.300	.2874		12.303	.4844	31/64	17.463	.6875	11/16	22.400	.8819	
2.381	.0938	3/32	7.400	.2913		12.400	.4882		17.500	.6890		22.500	.8858	
2.400	.0945		7.500	.2953		12.500	.4921		17.600	.6929		22.600	.8898	
2.500	.0984		7.541	.2969	19/64	12.600	.4961		17.700	.6968		22.622	.8906	57/64
2.600	.1024		7.600	.2992		12.700	.5000	1/2	17.800	.7008		22.700	.8937	
2.700	.1063		7.700	.3031		12.800	.5039		17.859	.7031	45/64	22.800	.8976	
2.778	.1094	7/64	7.800	.3071		12.900	.5079		17.900	.7047		22.900	.9016	
2.800	.1102		7.900	.3110		13.000	.5118		18.000	.7087		23.000	.9055	
2.900	.1142		7.938	.3125	5/16	13.097	.5156	33/64	18.100	.7126		23.019	.9063	29/32
3.000	.1181		8.000	.3150		13.100	.5157		18.200	.7165		23.100	.9094	
3.100	.1220		8.100	.3189		13.200	.5197		18.256	.7188	23/32	23.200	.9134	
3.175	.1250	1/8	8.200	.3228		13.300	.5236		18.300	.7205		23.300	.9173	
3.200	.1260		8.300	.3268		13.400	.5276		18.400	.7244		23.400	.9213	
3.300	.1299		8.334	.3281	21/64	13.494	.5313	17/32	18.500	.7283		23.416	.9219	59/64
3.400	.1339		8.400	.3307		13.500	.5315		18.600	.7323		23.500	.9252	
3.500	.1378		8.500	.3346		13.600	.5354		18.653	.7344	47/64	23.600	.9291	
3.572	.1406	9/64	8.600	.3386		13.700	.5394		18.700	.7362		23.700	.9331	
3.600	.1417		8.700	.3425		13.800	.5433		18.800	.7402		23.800	.9370	
3.700	.1457		8.731	.3438	11/32	13.891	.5469	35/64	18.900	.7441		23.900	.9409	
3.800	.1496		8.800	.3465		13.900	.5472		19.000	.7480		24.000	.9449	
3.900	.1535		8.900	.3504		14.000	.5512		19.050	.7500	3/4	24.100	.9488	
3.969	.1563	5/32	9.000	.3543		14.100	.5551		19.100	.7520		24.200	.9528	
4.000	.1575		9.100	.3583		14.200	.5591		19.200	.7559		24.209	.9531	61/64
4.100	.1624		9.128	.3594	23/64	14.288	.5625	9/16	19.300	.7598		24.300	.9567	
4.200	.1654		9.200	.3622		14.300	.5630		19.400	.7638		24.400	.9606	
4.300	.1693		9.300	.3661		14.400	.5669		19.447	.7656	49/64	24.500	.9646	
4.366	.1719	11/64	9.400	.3701		14.500	.5709		19.500	.7677		24.600	.9685	
4.400	.732		9.500	.3740		14.600	.5748		19.600	.7717		24.606	.9688	31/32
4.500	.1772		9.525	.3750	3/8	14.684	.5781	37/64	19.700	.7756		24.700	.9724	
4.600	.1811		9.600	.3780		14.700	.5787		19.800	.7795		24.800	.9764	
4.700	.1850		9.700	.3819		14.800	.5827		19.844	.7813	25/32	24.900	.9803	
4.763	.1875	3/16	9.800	.3858		14.900	.5866		19.900	.7835		25.000	.9843	
4.800	.1890		9.900	.3898		15.000	.5906		20.000	.7874		25.003	.9844	63/64
4.900	.1929		9.922	.3902	25/64	15.081	.5938	19/32	20.100	.7913		25.100	.9882	
5.000	.1969		10.000	.3937		15.100	.5945		20.200	.7953		25.200	.9921	
5.100	.2008		10.100	.3976		15.200	.5984		20.241	.7969	51/64	25.300	.9961	
												25.400	1.000	1

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
460	35	3318	52	10MM25-D	70	1216-D	44	14MM11-D	46	16MM25-D	70	17MM55-D	70
638	34	3320	52	10MM35	70	1218	44	14MM13	56	16MM35	70	185-000X	25
820	35	3322	52	10MM35-D	70	12MM03	56	14MM13-D	56	16MM35-D	70	185-000X-BH-4.25	112
822	12	3324	52	10MM45	69	12MM03-D	56	14MM15	69	16MM43	56	185-00X	25
830	35	3326	52	10MM45-D	69	12MM11	46	14MM15-D	69	16MM43-D	56	185-00X-BH-4.5	112
832	12	3328	52	10MM55	70	12MM11-D	46	14MM21	46	16MM45	69	185-0X	25
833	12	3408	51	10MM55-D	70	12MM13	56	14MM23	56	16MM45-D	69	185-0X-BH-4.5	112
834	12	3409	51	10MME1	47	12MM13-D	56	14MM23-D	56	16MM55	70	185-1.5MM	25
835	35	3410	51	10MME3	58	12MM15	69	14MM25	70	16MM55-D	70	185-10MM	25
838	35	3412	51	1105	44	12MM15-D	69	14MM33	56	170-0	30	185-10X	25
850	35	3414	51	1106	44	12MM21	46	14MM35	70	170-1	30	185-1X	25
852	12	3416	51	1106D	44	12MM25	70	14MM35-D	70	170-1/2	31	185-1X-BH-6.25	112
853	12	3418	51	1107	44	12MM25-D	70	14MM43	56	170-1/4	31	185-2.5MM	25
854	12	3420	51	1107D	44	12MM35	70	14MM43-D	56	170-1/4A	31	185-2MM	25
855	35	3424	51	1108	44	12MM35-D	70	14MM45	69	170-1/4-ACR	31	185-2X	25
858	35	3426	51	1108D	44	12MM45	69	14MM45-D	69	170-1/4B	30	185-3MM	25
3010	51	3428	51	1109	44	12MM45-D	69	14MM55	70	170-10	30	185-3X	25
3012	51	3430	51	1109D	44	12MM55	70	14MM55-D	70	170-10A	31	185-4-4X	25
3014	51	3432	51	1110	44	12MM55-D	70	1500-P	39	170-10-ACR	31	185-4MM	25
3016	51	3434	51	1110D	44	12MME1	47	1510-P	39	170-10-ACR	30	185-4X	25
3018	51	3510	52	1111	44	1308	44	15MM03	56	170-3	30	185-5MM	25
3020	51	3511	52	1111D	44	1308-D	44	15MM03-D	56	170-3/8	31	185-5X	25
3022	51	3512	52	1112	44	1310	44	15MM11	46	170-3/8A	31	185-6MM	25
3024	51	3514	52	1112D	44	1311	44	15MM13	56	170-3/8B	30	185-6X	25
3028	51	3516	52	1113	44	1311D	44	15MM13-D	56	170-3/8C	31	185-7MM	25
3108	51	3518	52	1114	44	1312	44	15MM15	69	170-4	30	185-7X	25
3109	51	3524	52	1114D	44	1313	44	15MM15-D	69	170-5	30	185-8MM	25
3110	51	3530	52	1116	44	1314	44	15MM21	46	170-5/16	31	185-8X	25
3111	51	3532	52	1116D	44	1316	44	15MM21D	46	170-5/16A	31	185-9MM	25
3112	51	3534	52	1118	44	1318	44	15MM23	56	170-5/16-ACR	31	185-9X	25
3113	51	10005S	111	1120	44	1320	44	15MM23-D	56	170-5/16B	30	18MM03	56
3114	51	10008S	111	11MM03	56	13MM03	56	15MM25	70	170-5/8	31	18MM13	56
3116	51	10010S	111	11MM03-D	56	13MM03-D	56	15MM25-D	70	170-6	30	18MM13-D	56
3117	51	10015S	111	11MM11	46	13MM11	46	15MM33	56	170-6-ACR	31	18MM15	69
3118	51	10016S	111	11MM11-D	46	13MM11-D	46	15MM33-D	56	170-7/16	31	18MM15-D	69
3119	51	10017S	111	11MM13	56	13MM13	56	15MM35	70	170-7/16C	31	18MM16	79
3120	51	10019S	111	11MM13-D	56	13MM13-D	56	15MM43	56	170-8	30	18MM17	81
3122	51	10020S	111	11MM15	69	13MM15	69	15MM43-D	56	170-8A	31	18MM23	56
3124	51	10025S	111	11MM15-D	69	13MM15-D	69	15MM45	69	170-8-ACR	31	18MM23-D	56
3126	51	10032S	111	11MM21	46	13MM21	46	15MM45-D	69	170-9/16	31	18MM25	70
3208	52	10034S	111	11MM25	70	13MM21D	46	15MM55	70	17MM03	56	18MM25-D	70
3209	52	103-00X	14	11MM35	70	13MM23	56	15MM55-D	70	17MM13	56	18MM35	70
3210	52	103-1X	14	11MM55	70	13MM23-D	56	15MME5	72	17MM13-D	56	18MM35-D	70
3211	52	103-2X	14	11MME1	47	13MM25	70	1608	46	17MM15	69	18MM43	56
3212	52	103-3X	14	1206	44	13MM25-D	70	1608-D	46	17MM15-D	69	18MM45	69
3214	52	103-4X	14	1206-D	44	13MM33	56	1612	46	17MM16	79	18MM45-D	69
3216	52	103-5X	14	1207	44	13MM35	70	1612-D	46	17MM17	81	18MM55	70
3218	52	103-6X	14	1208	44	13MM35-D	70	16MM03	56	17MM23	56	18MM55-D	70
3220	52	10MM03	56	1208-D	44	13MM43	56	16MM03-D	56	17MM23-D	56	1950-0X	29
3222	52	10MM03-D	56	1209	44	13MM43-D	56	16MM11	46	17MM25	70	1950-1X	29
3224	52	10MM11	46	1209-D	44	13MM45	69	16MM13	56	17MM25-D	70	1950-2X	29
3226	52	10MM11-D	46	1210	44	13MM45-D	69	16MM13-D	56	17MM35	70	1950-3X	29
3228	52	10MM13	56	1210-D	44	13MM55	70	16MM15	69	17MM35-D	70	1951-0X	29
3308	52	10MM13-D	56	1211	44	13MM55-D	70	16MM15-D	69	17MM36	79	1951-1X	29
3310	52	10MM15	69	1212	44	13MME1	47	16MM16	79	17MM43	56	1951-2X	29
3311	52	10MM15-D	69	1212-D	44	13MME3	58	16MM21	46	17MM43-D	56	1951-3X	29
3312	52	10MM21	46	1213	44	14MM03	56	16MM23	56	17MM45	69	1953-1X	29
3314	52	10MM21D	46	1214	44	14MM03-D	56	16MM23-D	56	17MM45-D	69	1953-2X	29
3316	52	10MM25	70	1216	44	14MM11	46	16MM25	70	17MM55	70	1953-3X	29

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
1956-2X	29	21MM15-D	69	265-1/4	31	27MM47	81	315-3X	25	324-20X	15	33120	52
19MM03	56	21MM16	79	265-10	30	27MM55	70	315-4MM	25	324-2X	15	33140	52
19MM03-D	56	21MM17	81	265-2	30	27MM55-D	70	315-4X	25	324-3X	15	33160	52
19MM13	56	21MM18	84	265-3	30	27MM57	82	315-5MM	25	324-4X	15	33180	52
19MM13-D	56	21MM23	56	265-4	30	27MM57	82	315-5X	25	324-5X	15	33200	52
19MM15	69	21MM25	70	265-5	30	28MM15	69	315-6MM	25	324-6X	15	33220	52
19MM15-D	69	21MM25-D	70	265-5/16	31	28MM25	70	315-6MM-BH-3	112	325-000X	15	33240	52
19MM17	81	21MM35	70	265-6	30	28MM37	82	315-6X	25	325-00X	15	33260	52
19MM23	56	21MM35-D	70	265-8	30	28MM38	84	315-7MM	25	325-0X	15	33MM15	69
19MM23-D	56	21MM36	79	265A-0	30	29MM15	69	315-7X	25	325-1X	15	33MM17	81
19MM25	70	21MM45	69	265A-1	30	29MM15-D	69	315-8MM	25	325-20X	15	33MM37	82
19MM35	70	21MM45-D	69	265A-1/4	31	29MM17	81	315-8MM-BH-3	112	325-3X	15	33MM38	84
19MM35-D	70	21MM55	70	265A-10	30	29MM18	84	315-8X	25	325-4X	15	34080	51
19MM36	79	21MM55-D	70	265A-2	30	29MM37	82	320-000X	15	325-5X	15	34100	51
19MM43	56	21MM57	82	265A-3	30	29MM55	70	320-00X	15	325-6X	15	34120	51
19MM43-D	56	22MM03	56	265A-3/8	31	3.5MM11	46	320-0X	15	325-000X	15	34140	51
19MM45	69	22MM13	56	265A-4	30	3.5MME1	47	320-1X	15	326-00X	15	34160	51
19MM55	70	22MM15	69	265A-5	30	30120	51	320-20X	15	326-0X	15	34180	51
1E08	45	22MM15-D	69	265A-5/16	31	30140	51	320-2X	15	326-1X	15	34200	51
1E10	45	22MM17	81	265A-6	30	30160	51	320-3X	15	326-20X	15	34240	51
1P06	45	22MM23	56	265A-7/16	31	30180	51	320-4X	15	326-2X	15	34300	51
1P07	45	22MM25	70	265A-8	30	30200	51	320-5X	15	326-3X	15	34MM15	69
1P08	45	22MM25-D	70	26MM15	69	30220	51	320-6X	15	326-4X	15	34MM18	84
1P10	45	22MM35	70	26MM15-D	69	30240	51	32080	52	326-5X	15	34MM37	82
1P11	45	22MM35-D	70	26MM17	81	30280	51	320-LX	16	326-6X	15	35120	52
1P12	45	22MM45	69	26MM25	70	309-000X	14	320-MX	16	327-000X	15	35140	52
1P14	45	22MM45-D	69	26MM55	70	309-00X	14	320-PX	16	327-00X	15	35160	52
1P16	45	22MM47	81	273-0	30	309-1X	14	320-RX	16	327-0X	15	35180	52
20MM03	56	22MM55	70	273-1	30	309-2X	14	320-SX	16	327-1X	15	35240	52
20MM15	69	22MM55-D	70	273-10	30	309-3X	14	320-TX	16	327-20X	15	35MM15	69
20MM17	81	22MM57	82	273-2	30	309-4X	14	32100	52	327-2X	15	3607	54
20MM25	70	23MM15	69	273-3	30	309-5X	14	32120	52	327-3X	15	3608	54
20MM25-D	70	23MM15-D	69	273-4	30	309-6X	14	32140	52	327-4X	15	3609	54
20MM35	70	23MM25	70	273-5	30	309-8X	14	32160	52	327-5X	15	3609-D	54
20MM35-D	70	23MM25-D	70	273-6	30	30MM15	69	32180	52	327-6X	15	3610	54
212-0	30	24BITKIT	39	273-8	30	30MM15-D	69	321-UX	16	328-000X	15	3610-D	54
212-1	30	24MM15	69	273A-1	30	30MM17	81	322-000LX	16	328-00X	15	3612	54
212-1/4	30	24MM15-D	69	273A-10	30	30MM18	84	322-00LX	16	328-0X	15	3612-D	54
212-1/4A	30	24MM16	79	273A-2	30	30MM25	70	32200	52	328-1X	15	3614	54
212-1/4A-ACR	30	24MM17	81	273A-3	30	30MM25-D	70	322-0LX	16	328-20X	15	3614-D	54
212-1/4-ACR	30	24MM18	84	273A-4	30	30MM37	82	32220	52	328-2X	15	3616	54
212-10	30	24MM25	70	273A-6	30	30MM47	81	32240	52	328-3X	15	3616-D	54
212-10A	30	24MM25-D	70	273A-8	30	30MM48	84	32260	52	328-4X	15	3618	54
212-10-ACR	30	24MM35	70	273B-0	30	30MM55	70	32280	52	328-5X	15	3618-D	54
212-2	30	24MM35-D	70	273B-1	30	30MM57	82	322-MX	16	328-6X	15	3620	54
212-3	30	24MM36	79	273B-10	30	30MM57	82	323-000X	15	328-LX	16	3624	54
212-3/8A	30	24MM37	82	273B-2	30	31080	51	323-00X	15	328-MX	16	36MM15	69
212-4	30	24MM38	84	273B-3	30	31100	51	323-0X	15	328-PX	16	36MM17	81
212-4-ACR	30	24MM47	81	273B-4	30	31120	51	323-1X	15	328-RX	16	36MM18	84
212-5	30	24MM55	70	273B-5	30	31130	51	323-20X	15	328-SX	16	36MM37	82
212-5/16A	30	24MM55-D	70	273B-6	30	31140	51	323-2X	15	32MM15	69	36MM38	84
212-5/16A-ACR	30	24MM57	82	273B-8	30	31160	51	323-3X	15	32MM15-D	69	37MM17	81
212-6	30	24MM57	82	27MM15	69	31200	51	323-4X	15	32MM17	81	37MM38	84
212-6-ACR	30	25MM15	69	27MM15-D	69	31240	51	323-5X	15	32MM18	84	3E10	54
212-8	30	25MM25	70	27MM17	81	315-10MM	25	323-6X	15	32MM25	70	3E11	54
212-8A	30	25MM35	70	27MM18	84	315-10MM-BH-3	112	324-000X	15	32MM37	82	3E12	54
21MM03	56	25MM37	82	27MM25	70	315-12MM	25	324-00X	15	32MM47	81	3E14	54
21MM13	56	265-0	30	27MM37	82	315-14MM	25	324-0X	15	32MM55	70	3E16	54
21MM15	69	265-1	30	27MM38	84	315-2.5MM	25	324-1X	15	33100	52	3P10	54



### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
3P12	54	440-21	9	440-TX-27-H	17	453X	12	485-1X	14	492-27X	11	49-40IPRX	20
3P14	54	440-2-PZDX	21	440-TX-27-W	17	46MM17	81	485-2X	14	492-4X	11	49-40IPX	20
3P16	54	440-2R	9	440-TX-27X	17	46MM18	84	485-3X	14	49-25IPRX	20	49-45IPX	20
4.5MM11	46	440-2-SFX	22	440-TX-30-H	17	46MM38	84	485-4X	14	49-25IPX	20	494X	11
400-BH	35	440-2X	9	440-TX-30I	17	480	34	48-55IP	19	49-27IPRX	20	498	34
401-PZDX	21	440-30IPRX	20	440-TX-30-W	17	480-1-PZDX	21	485-5X	14	49-27IPX	20	49-A-10IPX	20
401X	12	440-30IPX	20	440-TX-30X	17	480-1X	10	485-6X	14	492-A-27X	11	49-A-15IPX	20
402-PZDX	21	440-3125X	9	440-TX-40-H	17	480-225X	10	485-7X	14	492-A-ACR2-DX	11	49-A-20IPX	20
402X	12	440-325X	9	440-TX-40I	17	480-22X	10	488	34	492-A-ACR2X	11	49-A-25IPX	20
403I	12	440-32X	9	440-TX-40-W	17	480-24X	10	489	34	492-ACR2-DX	11	49-A-27IPX	20
403-PZDX	21	440-33X	9	440-TX-40X	17	480-2-ACR2-RX	10	48-TSQ-10M	29	492-ACR2-RX	11	49-A-30IPX	20
403-QDX	22	440-34X	9	440-TX-45X	17	480-2-ACR2X	10	48-TSQ-12M	29	492-ACR2X	11	49-A-TX-05	18
403X	12	440-3-ACR3-DX	9	440-TX-50X	17	480-2I	10	48-TSQ-14M	29	492-AFX	23	49-A-TX-06	18
41MM17	81	440-3-ACR3-RX	9	441P1S	110	480-2-PZDX	21	48-TSQ-5M	29	492-AI	11	49-A-TX-07	18
41MM18	84	440-3-ACR3X	9	442P2P	110	480-2-SFX	22	48-TSQ-6M	29	492-A-PZDX	21	49-A-TX-08	18
41MM37	82	440-3BNX	9	442P3S	110	480-2X	10	48-TSQ-8M	29	492-A-SFX	22	49-A-TX-09	18
42MM18	84	440-3I	9	445-000X	14	480-30IPX	20	48-TX-40	19	492-AX	11	49-A-TX-10	18
440-10IPRX	20	440-3-PZDX	21	445-00-15X	14	480-325X	10	48-TX-45	19	492-B-27X	11	49-A-TX-10-H	18
440-10IPX	20	440-3-SFX	22	445-00X	14	480-34X	10	48-TX-50	19	492-B-ACR2-DX	11	49-A-TX-15	18
440-115X	9	440-3X	9	445-0-15X	14	480-3-ACR3X	10	48-TX-55	19	492-B-ACR2X	11	49-A-TX-15-H	18
440-125X	9	440-40IPRX	20	445-0X	14	480-3I	10	490	34	492-BFX	23	49-A-TX-15-W	18
440-12X	9	440-40IPX	20	445-10-15X	14	480-3-PZDX	21	490-10	34	492-BI	11	49-A-TX-20	18
440-13X	9	440-45IPX	20	445-10X	14	480-3X	10	490-3	34	492-B-PZDX	21	49-A-TX-20-H	18
440-15IPRX	20	440-4-PZDX	21	445-1-15X	14	480-40IP-CH	20	490-4	34	492-B-SFX	22	49-A-TX-25	18
440-15IPX	20	440-4X	9	445-1X	14	480-40IPX	20	490-5	34	492-BX	11	49-A-TX-27	18
440-1-ACR1-DX	9	440-9IPX	20	445-20-15X	14	480-425X	10	490-6	34	492-C-27X	11	49-A-TX-30	18
440-1-ACR1-RX	9	440-FX	23	445-20X	14	480-45IPX	20	490-8	34	492-C-ACR2-DX	11	49-A-TX-40	18
440-1-ACR1X	9	440-MT-0	12	445-2-15X	14	480-4-ACR4X	10	4910-AX	11	492-CC-27X	11	49-B-10IPX	20
440-1I	9	440-MT-00	12	445-2X	14	480-4BNX	10	4910-BX	11	492-CCX	11	49-B-15IPX	20
440-1-PZDX	21	440-MT-1	12	445-30-15X	14	480-4X	10	4910-CX	11	492-CFX	23	49-B-20IPX	20
440-1-SFX	22	440-MT-2	12	445-30X	14	480-50IPX	20	49-10IPRX	20	492-CI	11	49-B-25IPX	20
440-1X	9	440-TSQ-10M	29	445-3-15X	14	480-55IPX	20	49-10IPX	20	492-C-PZDX	21	49-B-27IPX	20
440-20IPRX	20	440-TSQ-4M	29	445-3X	14	480-FX	23	4910X	11	492-C-SFX	22	49-B-30IPX	20
440-20IPX	20	440-TSQ-5M	29	445-4-15X	14	480-MT-3	12	49-15IPRX	20	492-CX	11	49-B-5IPX	20
440-215-PZDX	21	440-TSQ-6M	29	445-4X	14	480-MTS-2	12	49-15IPX	20	492-FX	23	49-B-TX-05	18
440-215-SFX	22	440-TSQ-8M	29	445-5X	14	480-TSQ-10M	29	491-A-ACR1X	11	492I	11	49-B-TX-06	18
440-215X	9	440-TX-05X	17	445-6X	14	480-TSQ-12M	29	491-ACR1-DX	11	492-PZDX	21	49-B-TX-07	18
440-225-SFX	22	440-TX-06X	17	446-0X	10	480-TSQ-14M	29	491-ACR1-RX	11	492-SFX	22	49-B-TX-08	18
440-225X	9	440-TX-07-H	17	446-12X	10	480-TSQ-6M	29	491-ACR1X	11	492X	11	49-B-TX-09	18
440-22-ACR2-DX	9	440-TX-07X	17	446-1-PZDX	21	480-TSQ-8M	29	491-AFX	23	4930-AX	11	49-B-TX-10	18
440-22-ACR2-RX	9	440-TX-08-H	17	446-1X	10	480-TX-20X	17	491-A-PZDX	21	4930-BX	11	49-B-TX-10-H	18
440-22-ACR2X	9	440-TX-08X	17	446-215T	10	480-TX-25X	17	491-A-SFX	22	4930-CCX	11	49-B-TX-15	18
440-22-PZDX	21	440-TX-09-H	17	446-215X	10	480-TX-27X	17	491-AX	11	4930-CX	11	49-B-TX-15-H	18
440-22-SFX	22	440-TX-09X	17	446-225T	10	480-TX-30X	17	491-BFX	23	49-30IPRX	20	49-B-TX-15-W	18
440-22X	9	440-TX-10-H	17	446-22TX	10	480-TX-40-4X	17	491-B-PZDX	21	49-30IPX	20	49-B-TX-20	18
440-23X	9	440-TX-10-W	17	446-22X	10	480-TX-40-H	17	491-B-SFX	22	4930X	11	49-B-TX-20-H	18
440-24X	9	440-TX-10X	17	446-23T	10	480-TX-40I	17	491-BX	11	493-ACR3X	11	49-B-TX-20-W	18
440-255X	9	440-TX-15-125	17	446-27X	10	480-TX-40X	17	491-CCX	11	493-AI	11	49-B-TX-25	18
440-25IPRX	20	440-TX-15-H	17	446-2-ACR2-DX	9	480-TX-45-6	17	491-CFX	23	493-A-PZDX	21	49-B-TX-27	18
440-25IPX	20	440-TX-15-W	17	446-2-ACR2X	9	480-TX-45-H	17	491-C-PZDX	21	493-AR	11	49-B-TX-30	18
440-25IPX	20	440-TX-15X	17	446-2I	10	480-TX-45X	17	491-C-SFX	22	493-AX	11	49-B-TX-30-W	18
440-26X	9	440-TX-20-125	17	446-2-PZDX	21	480-TX-50-H	17	491-CX	11	493-BFX	23	49-B-TX-40	18
440-27IPRX	20	440-TX-20-2	17	446-2-SFX	22	480-TX-50X	17	491-FX	23	493-B-PZDX	21	49-C-10IPX	20
440-27IPX	20	440-TX-20-H	17	446-2X	10	480-TX-55-H	17	491-PZDX	21	493-BX	11	49-C-20IPX	20
440-27X	9	440-TX-20-W	17	446-3X	10	480-TX-55X	17	491-SFX	22	493-C-PZDX	21	49-C-8IPX	20
440-2-ACR2-DX	9	440-TX-20X	17	446-FX	23	482X	11	491X	11	493-CX	11	49-C-TX-07	18
440-2-ACR2-RI	9	440-TX-25-H	17	450	35	483X	11	49-20IPRX	20	493-FX	23	49-C-TX-08	18
440-2-ACR2-RX	9	440-TX-25-W	17	451X	12	484X	11	49-20IPX	20	493-PZDX	21	49-C-TX-09	18
440-2-ACR2X	9	440-TX-25X	17	452X	12	48-50IP	19	492-200MM	11	493X	11	49-C-TX-10	18

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
49-C-TX-15	18	503X	12	5216	64	5420-D	63	5612-D	66	6136	78	6N-0811-3	37
49-C-TX-15-H	18	50MM18	84	5216-D	64	5421	63	5614	66	6140	78	6N-0812-2	37
49-C-TX-20	18	50MM38	84	5218	64	5421-D	63	5614-D	66	6142	78	6N-0812-3	37
49-C-TX-20-H	18	50-TX-08	19	5218-D	64	5424	63	5616	66	6144	78	6N-0812-4	37
49-C-TX-25	18	50-TX-08	19	5220	64	5424-D	63	5616-D	66	6146	78	6N-0812-6	37
49-C-TX-27	18	50-TX-10	19	5222	64	5426	63	5618	66	6148	78	6N-08-12M-10	37
49-C-TX-30	18	50-TX-10	19	5224	64	5426-D	63	5618-D	66	630	34	6N-08-12M-2	37
49-C-TX-40	18	50-TX-15	19	5224-D	64	5428	63	5620	66	6320	78	6N-08-12M-3	37
49J-2P2P-100MI	110	50-TX-15	19	5226	64	5430	63	5620-D	66	6322	78	6N-08-12M-4	37
49J-2P2P-100MR	110	50-TX-20	19	5226-D	64	5430-D	63	5622	66	6324	78	6N-08-12M-6	37
49J-2P2P-150MR	110	50-TX-20	19	5228	64	5432	63	5624	66	6326	78	6N-0814-2	37
49J-2P2P-160MR	110	5108	63	5228-D	64	5432-D	63	5624-D	66	6330	78	6N-0814-3	37
49J-2P2P-50MMI	110	5110	63	5230	64	5434	63	5626	66	6336	78	6N-0814-4	37
49J-2P2P-50MMR	110	5110-D	63	5230-D	64	5434-D	63	5628	66	6340	78	6N-0814-6	37
49J-2P2P-65MMR	110	5112	63	5232	64	5436	63	5632	66	6342	78	6N-0816-2	37
49J-2P2P-75MMI	110	5112-D	63	5234	64	5436-D	63	5634	66	6344	78	6N-0816-3	37
49J-2P2P-75MMR	110	5114	63	5236	64	5438	63	5636	66	6348	78	6N-0818-2	37
49J-2P2P-8I	110	5114-D	63	5236-D	64	5440	63	5636-D	66	635-10X	14	6N-08-8M-3	37
49-TSQ-10M	29	5116	63	5238	64	5440-D	63	5716	67	635-6X	14	6N-08-8M-4	37
49-TSQ-12M	29	5116-D	63	5240	64	5442	63	5720	67	635-7X	14	6N-08-8M-6	37
49-TSQ-4M	29	5118	63	5240-D	64	5510	64	5724	67	635-8X	14	6N-1410-3	38
49-TSQ-5M	29	5118-D	63	5242	64	5512	64	5724-D	67	635-9X	14	6N-1412-3	38
49-TSQ-6M	29	5119	63	5244	64	5512-D	64	5728	67	6426	78	6N-1414-3	38
49-TSQ-8M	29	5120	63	5248	64	5514	64	5812	67	6430	78	6N-1416-3	38
49-TX-05	18	5120-D	63	5310	64	5514-D	64	5816-D	67	6520-D	78	6N-1416-4	38
49-TX-06	18	5122	63	5312	64	5516	64	5820	67	6524	78	6N-1418-3	38
49-TX-07	18	5122-D	63	5314	64	5516-D	64	5820-D	67	6524-D	78	6N-1418-6	38
49-TX-08	18	5124	63	5316	64	5518	64	5822	67	6528-D	78	6N-1420-3	38
49-TX-08-W	18	5124-D	63	5316-D	64	5518-D	64	5822-D	67	68-0808	38	6N-1424-3	38
49-TX-09	18	5126	63	5318	64	551X	12	5826-D	67	68-0809	38	6N-1424-6	38
49-TX-10	18	5126-D	63	5318-D	64	5520	64	5832-D	67	68-0810	38	6N-2028-4	38
49-TX-10-H	18	5128	63	5320	64	5520-D	64	5834-D	67	68-0812	38	6N-2036-4	38
49-TX-10-W	18	5128-D	63	5322	64	5522	64	5836-D	67	68-0814	38	7120	80
49-TX-15	18	5130	63	5322-D	64	5522-D	64	5912	66	68-0816	38	7120-D	80
49-TX-15-8	18	5130-D	63	5324	64	5524	64	5912-D	66	68-0818	38	7122	80
49-TX-15-H	18	5131	63	5324-D	64	5524-D	64	5914	66	68-0820	38	7122-D	80
49-TX-15-W	18	5132	63	5326	64	5526	64	5914-D	66	6MM11	46	7124	80
49-TX-20	18	5132-D	63	5328	64	5526-D	64	5918	66	6MM11-D	46	7124-D	80
49-TX-20-5	18	5134	63	5330	64	5528	64	5918-D	66	6MM13	56	7128	80
49-TX-20-W	18	5134-D	63	5330-D	64	5528-D	64	591-PZDX	21	6MM21	46	7128-D	80
49-TX-25	18	5136	63	5332	64	552-FX	23	591X	12	6MM43	56	7130	80
49-TX-25-W	18	5136-D	63	5334	64	552I	12	5920	66	6MME1	47	7130-D	80
49-TX-27	18	5138	63	5336	64	552X	12	592-PZDX	21	6N-0806-2	37	7132	80
49-TX-27-W	18	5138-D	63	5336-D	64	5530	64	592X	12	6N-0806-3	37	7132-D	80
49-TX-30	18	5140	63	5338	64	5530-D	64	5E10	66	6N-0808-2	37	7134	80
49-TX-30-W	18	5140-D	63	5340	64	5532	64	5E12	66	6N-0808-3	37	7134-D	80
49-TX-40	18	5142	63	5340-D	64	5532-D	64	5E16	66	6N-0808-4	37	7136	80
49-TX-45	18	5144	63	5342	64	5534	64	5MM11	46	6N-0808-5	37	7136-D	80
4MM11	46	5144-D	63	5344	64	5534-D	64	5MM21	46	6N-0808-6	37	7140	80
4MME1	47	5146	63	5348	64	553X	12	5P12	66	6N-0810-2	37	7140-D	80
5.5MM11	46	5148	63	5412	63	55-TX-10	19	5P14	66	6N-0810-3	37	7142	80
5.5MM21	46	5148-D	63	5412-D	63	55-TX-15	19	610	34	6N-0810-4	37	7142-D	80
5.5MME1	47	5152	63	5414	63	55-TX-20	19	6118	78	6N-0810-5	37	7144	80
501-AX	12	5152-D	63	5414-D	63	55-TX-25	19	6120	78	6N-0810-6	37	7146	80
501X	12	5154	63	5416	63	55-TX-30	19	6120-D	78	6N-08-10M-3	37	7148	80
502-ACR2X	12	5156	63	5416-D	63	5609	66	6122	78	6N-08-10M-4	37	7148-D	80
502-AX	12	5210	64	5418	63	5610	66	6124	78	6N-08-10M-6	37	7152	80
502-PZDX	21	5212	64	5418-D	63	5610-D	66	6128	78	6N-08-10M-8	37	7152-D	80
502X	12	5214	64	5420	63	5612	66	6134	78	6N-0811-2	37	7154	80

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
7154-D	80	7540	80	830-4X	10	8640	84	95-QD-3	22	A-5-19MM	116	AM-4MM-3	26
7156	80	7542	80	8324	84	8640-D	84	95-TX-40	18	A-520	115	AM-4MM-4	26
7158	80	7548	80	8326	84	8644	84	9MM11	46	A-5-20MM	116	AM-4MM-6	26
7160	80	7552	80	832-F	23	8646-D	84	9MM11-D	46	A-5-21MM	116	AM-4MM-BH-4	112
7160-D	80	7556	80	8332	84	8648	84	9MM13	56	A-522	115	AM-5MM	26
7164	80	7624	81	8336	84	8652-D	84	9MM13-D	56	A-5-22MM	116	AM-5MM-3	26
7164-D	80	7628	81	8338	84	8MM03	56	9MM21	46	A-5-23MM	116	AM-5MM-4	26
7168	80	7630	81	833-F	23	8MM11	46	9MM21D	46	A-524	115	AM-5MM-6	26
7170	80	7632	81	8340	84	8MM11-D	46	9MM23	56	A-5-24MM	116	AM-5MM-BH-4	112
7170-D	80	7636	81	8342	84	8MM13	56	9MM23-D	56	A-5-25MM	116	AM-6MM	26
7172	80	7836-D	81	8346	84	8MM13-D	56	9MM43	56	A-526	115	AM-6MM-4	26
7172-D	80	7MM03	56	834-F	23	8MM21	46	9MM43-D	56	A-528	115	AM-6MM-6	26
7176	80	7MM11	46	834-TX-25	19	8MM21D	46	9MME1	47	A-530	115	AM-6MM-BH-165M	112
7180	80	7MM11-D	46	834-TX30-1.62	19	8MM23	56	A-108	115	A-534	115	AM-6MM-BH-255M	112
7180-D	80	7MM13	56	834-TX40-2.95	19	8MM23-D	56	A-110	115	A-536	115	AM-7MM	26
7324-D	80	7MM21	46	834-TX-45-1.62	19	8MM43	56	A-1-10MM	116	A-538	115	AM-8MM	26
7324SKT	80	7MM23	56	834-TX-45-5	19	8MM43-D	56	A-1-11MM	116	A-540	115	AM-MT-0	12
7328	80	7MM43	56	834-TX-50	19	8MME1	47	A-112	115	AM-01-A	25	AM-MT-1	12
7330	80	7MM43-D	56	834-TX50-1.62	19	8MME3	58	A-1-12MM	116	AM-02	25	AM-MT-2	12
7330-D	80	7MME1	47	8356	84	9172	85	A-1-13MM	116	AM-03	25	AM-04	26
7332	80	8124-D	83	8360	84	950-0X	28	A-114	115	AM-03-6	25	AM-04-A	26
7332-D	80	8126	83	8364	84	950-1X	28	A-116	115	AM-03-A	25	AM-05	26
7334	80	8128-D	83	8370	84	950-2X	28	A-118	115	AM-03-A-4	25	AM-05-6	26
7336	80	8130-D	83	8378	84	950-3X	28	A-120	115	AM-04	25	AM-06	26
7336-D	80	8132-D	83	8380	84	950-QD-2	22	A-1-6MM	116	AM-04-3	25	AM-06-6	26
7340	80	8134-D	83	8382	84	954-0X	28	A-1-7MM	116	AM-04-35	25	AM-07	26
7342	80	8136-D	83	8384	84	954-0X	28	A-1-8MM	116	AM-04-4	25	AM-07-8	26
7346	80	8138	83	8430-D	83	954-1X	28	A-1-9MM	116	AM-04-5	25	AM-08	26
7348	80	8138-D	83	8432	83	954-1X	28	A-3-10MM	116	AM-04-6	25	AM-08-8	26
7352	80	8140-D	83	8432-D	83	954-2X	28	A-3-11MM	116	AM-04-A	25	AM-09	26
7356	80	8142	83	8434	83	954-2X	28	A-312	115	AM-04-A-4	25	AM-10	26
7358	80	8142-D	83	8436	83	954-3X	28	A-3-12MM	116	AM-05	25	AM-10-6	26
7360	80	8144-D	83	8440	83	954-3X	28	A-3-13MM	116	AM-05-3	25	AM-10MM	26
7362	80	8146-D	83	8440-D	83	954-A-0X	28	A-314	115	AM-05-35	25	AM-12	26
7364	80	8148	83	8442	83	954-A-0X	28	A-3-14MM	116	AM-05-4	25	AM-12-6	26
7372	80	8148-D	83	8442-D	83	954-A-1X	28	A-3-15MM	116	AM-05-45	25	AM-12MM	26
7424	80	8150-D	83	8444-D	83	954-A-1X	28	A-316	115	AM-05-5	25	AM-14MM	26
7424-D	80	8152	83	8448	83	954-A-2X	28	A-3-16MM	116	AM-05-6	25	AM-14MM-6	26
7426	80	8160	83	8448-D	83	954-A-2X	28	A-3-17MM	116	AM-05-8	25	AM-16	26
7428	80	8162	83	8454	83	954-A-3X	28	A-318	115	AM-05-BH-9	112	AM-16-6	26
7428-D	80	8162-D	83	8456	83	954-A-3X	28	A-3-18MM	116	AM-06	25	AM-3MM	26
7430	80	8170	83	8458	83	954-B-1X	28	A-3-19MM	116	AM-06-3	25	AM-4MM	26
7430-D	80	8172	83	8460	83	954-B-1X	28	A-320	115	AM-06-35	25	AM-5MM	26
7432	80	8174	83	8464	83	954-B-2X	28	A-322	115	AM-06-4	25	AM-6MM	26
7434	80	8176	83	8472	83	954-B-2X	28	A-324	115	AM-06-6	25	AM-6MM-BH-80M	112
7436	80	8180	83	8480	83	954-B-3X	28	A-328	115	AM-07	25	AM-8MM	26
7438	80	8186	83	8530	84	954-B-3X	28	A-5-10MM	116	AM-08	25	AM-8MM-BH	112
7442	80	8188	83	8536	84	954-C-0X	28	A-5-11MM	116	AM-1.5MM	26	AM-MT-3	12
7442-D	80	8190	83	8540	84	954-C-0X	28	A-512	115	AM-10	25	AM-MT-4	12
7446	80	821	12	8542	84	954-C-1X	28	A-5-12MM	116	AM-10MM	26	AP-08	26
7448	80	8228	83	854-55IP	19	954-C-1X	28	A-5-13MM	116	AM-2.5MM	26	AP-10	26
7454	80	822-F	23	854-TX-50	19	954-C-2X	28	A-514	115	AM-2.5MM-4	26	AP-12	26
7456	80	8236	83	854-TX55-150M	19	954-C-2X	28	A-5-14MM	116	AM-2MM	26	AP-16	26
7524	80	8240	83	8624	84	954-C-3X	28	A-5-15MM	116	AM-3MM	26	AP-18	26
7528	80	825	35	8632	84	954-C-3X	28	A-516	115	AM-3MM-3	26	AP-20	26
7530	80	830-1X	10	8634	84	95-A-QD-2	22	A-5-16MM	116	AM-3MM-4	26	AP-24	26
7530-D	80	830-2R	10	8636	84	95-B-QD-2	22	A-5-17MM	116	AM-3MM-6	26	APH35M	27
7536	80	830-2X	10	8638	84	95-DG-TX40-75MM	18	A-518	115	AM-3MM-BH-4	112	APH38	27
7536-D	80	830-3X	10	8638-D	84	95-QD-2	22	A-5-18MM	116	AM-4MM	26	APH56	27

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
APH56M	27	EX-1003-6	85	EX-257-B-2	61	EX-376-B-15	60	EX-502-5	40	EX-512-3	40	EXL-15	108
APS312LM	59	EX-1003-8	85	EX-257-B-3	61	EX-376-B-2	60	EX-502-6	40	EX-512-B-2	40	EXL-15	109
APS312M	59	EX-1003-B-10	85	EX-257-B-4	61	EX-376-B-3	60	EX-502-8	40	EX-512-B-4	40	FC-310	109
APS38	54	EX-1003-B-12	85	EX-257-B-5	61	EX-376-B-4	60	EX-502-B	40	EX-620-3	40	FC-312	109
APS38L	54	EX-1003-B-15	85	EX-257-B-6	61	EX-376-B-5	60	EX-502-B-3	40	EX-620-6	40	FL-HE-9518	65
APS511M	72	EX-1003-B-4	85	EX-258-4	76	EX-376-B-6	60	EX-502-B-4	40	EX-621-3	40	FL1108	45
APS58XL	67	EX-1003-B-6	85	EX-258-B-2	76	EX-376-B-8	60	EX-503	61	EX-621-6	40	FL1109	45
APU56	68	EX-1003-B-8	85	EX-260	76	EX-376-B-9	60	EX-503-B	61	EX-621-8	40	FL1110	45
APU56M	73	EX-1005	85	EX-260-B	76	EX-377-10	76	EX-504	76	EX-621-B-3	40	FL1112	45
AS-06	26	EX-1005-B	85	EX-262	40	EX-377-12	76	EX-504-B	76	EX-622	61	FL1114	45
AS-10	26	EX-1101	85	EX-262-4	40	EX-377-15	76	EX-505	79	EX-623	76	FL1116	45
AS-12	26	EX-250	39	EX-262-6	40	EX-377-2	76	EX-505-B	79	EX-623-B	76	FL1212	45
AU37M	59	EX-250-12	39	EX-262-B-4	40	EX-377-3	76	EX-506	82	EX-624	79	FL1214	45
AW-95	39	EX-250-14	39	EX-370	40	EX-377-4	76	EX-506-B	82	EX-624-B	79	FL1216	45
AW-95-L	39	EX-250-18	39	EX-370-10	40	EX-377-5	76	EX-507-2	61	EX-625	82	FL3012	53
AW-95-LL	39	EX-250-2	39	EX-370-12	40	EX-377-6	76	EX-507-3	61	EX-625-B	82	FL3014	53
BNAE-3MM	32	EX-250-22	39	EX-370-18	40	EX-377-8	76	EX-507-6	61	EX-626-3	76	FL3016	53
BNAE-4MM	32	EX-250-3	39	EX-370-2	40	EX-377-B-10	76	EX-507-B-3	61	EX-627-10	79	FL3018	53
BNAE-4MM-ACR	32	EX-250-4	39	EX-370-3	40	EX-377-B-12	76	EX-507-B-4	61	EX-627-12	79	FL3022	53
BNAE-5MM	32	EX-250-5	39	EX-370-4	40	EX-377-B-2	76	EX-507-B-6	61	EX-627-3	79	FL3024	53
BNAE-5MM-ACR	32	EX-250-8	39	EX-370-5	40	EX-377-B-3	76	EX-508-10	76	EX-627-4	79	FL3110	53
BNAE-6MM	32	EX-250-B	39	EX-370-6	40	EX-377-B-4	76	EX-508-12	76	EX-627-6	79	FL3112	53
BNAE-8MM	32	EX-250-B-12	39	EX-370-B	40	EX-377-B-5	76	EX-508-15	76	EX-627-8	79	FL3114	53
BNAE-8MM-ACR	32	EX-250-B-2	39	EX-370-B-10	40	EX-377-B-6	76	EX-508-16	76	EX-628-3	82	FL3116	53
BW-156	109	EX-250-B-3	39	EX-370-B-2	40	EX-377-B-9	76	EX-508-18	76	EX-750	61	FL3118	53
BW-748	109	EX-250-B-4	39	EX-370-B-3	40	EX-380	40	EX-508-2	76	EX-750-B	61	FL3120	53
BW-848	109	EX-250-B-5	39	EX-370-B-4	40	EX-380-2	40	EX-508-24	76	EX-751	76	FL3122	53
CMS1408	48	EX-250-B-6	39	EX-370-B-6	40	EX-380-3	40	EX-508-3	76	EX-751-B	76	FL3124	53
CMS1409	48	EX-250-B-8	39	EX-370-B-8	40	EX-380-4	40	EX-508-4	76	EX-752	79	FL-3210	53
CMS1410	48	EX-251	40	EX-371	40	EX-380-6	40	EX-508-5	76	EX-752-B	79	FL-3212	53
CMS1412	48	EX-251-10	40	EX-371-10	40	EX-380-8	40	EX-508-6	76	EX-753	82	FL-3214	53
CMS1414	48	EX-251-2	40	EX-371-15	40	EX-380-B-2	40	EX-508-8	76	EX-753-B	82	FL-3216	53
CMS1507	48	EX-251-3	40	EX-371-2	40	EX-500-2	40	EX-508-9	76	EX-754	85	FL-3218	53
CMS1508	48	EX-251-6	40	EX-371-2 3/4	40	EX-500-3	40	EX-508-B-10	76	EX-754-B	85	FL-3220	53
CMS1509	48	EX-251-8	40	EX-371-3	40	EX-500-4	40	EX-508-B-12	76	EX-755-10	82	FL-3312	53
CMS1510	48	EX-251-B	40	EX-371-4	40	EX-500-6	40	EX-508-B-15	76	EX-755-12	82	FL-3314	53
CMS-3412	60	EX-251-B-2	40	EX-371-5	40	EX-500-B-2	40	EX-508-B-2	76	EX-755-15	82	FL-3316	53
CMS-3414	60	EX252	50	EX-371-6	40	EX-500-B-3	40	EX-508-B-3	76	EX-755-4	82	FL-3318	53
CMS-3416	60	EX252B	50	EX-371-8	40	EX-500-B-4	40	EX-508-B-4	76	EX-755-6	82	FL-3320	53
CMS-3418	60	EX-254	61	EX-371-B-3	40	EX-500-B-6	40	EX-508-B-5	76	EX-755-8	82	FL-3324	53
CMS-3420	60	EX-254-B	61	EX372	50	EX-501-10	40	EX-508-B-6	76	EX-755-B-12	82	FL-3326	53
CMS-3512	60	EX25510	50	EX372B	50	EX-501-12	40	EX-508-B-8	76	EX-755-B-15	82	FL3412	53
CMS-3518	60	EX25512	51	EX-374	60	EX-501-15	40	EX-508-B-9	76	EX-755-B-4	82	FL3414	53
CMS-5416	75	EX25514	50	EX-374-B	60	EX-501-2	40	EX-509-10	79	EX-755-B-6	82	FL-5114	65
CMS-5422	75	EX2552	50	EX-375	76	EX-501-3	40	EX-509-12	79	EX-755-B-8	82	FL-5116	65
CMS-5426	75	EX2553	50	EX-375-B	76	EX-501-4	40	EX-509-3	79	EX-756-4	85	FL-5118	65
CMS-5430	75	EX2554	50	EX-376-10	60	EX-501-5	40	EX-509-4	79	EX-756-6	85	FL-5120	65
DB-08	36	EX2556	50	EX-376-12	60	EX-501-6	40	EX-509-5	79	EX-756-8	85	FL-5122	65
DB-10	36	EX2558	50	EX-376-15	60	EX-501-8	40	EX-509-6	79	EX-756-B-8	85	FL-5124	65
DB-12	36	EX25582	50	EX-376-18	60	EX-501-B-10	40	EX-510-3	82	EX-757-3	41	FL-5126	65
EX-507-B-NC	101	EX25584	50	EX-376-2	60	EX-501-B-12	40	EX-510-4	82	EX-757-B-3	41	FL-5128	65
EX-1000	82	EX25586	50	EX-376-3	60	EX-501-B-2	40	EX-510-6	82	EX-758-4	41	FL-5130	65
EX-1000-B	82	EX-257-8	61	EX-376-4	60	EX-501-B-3	40	EX-510-8	82	EX-758-6	41	FL-5132	65
EX-1001	85	EX-257-11	61	EX-376-5	60	EX-501-B-4	40	EX-510-B-3	82	EX-758-9	41	FL-5134	65
EX-1001-B	85	EX-257-2	61	EX-376-6	60	EX-501-B-5	40	EX-510-B-4	82	EX-758-B-4	41	FL-5216	65
EX-1003-10	85	EX-257-3	61	EX-376-8	60	EX-501-B-6	40	EX-510-B-5	82	EXL-1000	108	FL-5218	65
EX-1003-12	85	EX-257-4	61	EX-376-9	60	EX-501-B-8	40	EX-510-B-6	82	EXL-1000	108	FL-5222	65
EX-1003-15	85	EX-257-5	61	EX-376-B-10	60	EX-502	40	EX-510-B-8	82	EXL-1100	108	FL-5224	65
EX-1003-4	85	EX-257-6	61	EX-376-B-12	60	EX-502-3	40	EX-512-2	40	EXL-1100	108	FL-5226	65



### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
FL-5228	65	HTS-12	32	KAW-C-7-13M-6	59	KC-6-10M-6	49	KDW-C-44-6	55	KH-8-17M-9	74	KN-7-12M-6	74
FL-5316	65	HTS-2	32	KAW-C-7-14M-6	59	KC-6-10M-9	49	KDW-C-45-6	55	KH-8-18M-3	74	KN-7-12M-9	74
FL-5318	65	HTS-2A	32	KAW-C-8-15M-9	59	KC-6-8M-3	49	KDW-C-6-10M-6	59	KH-8-18M-4	74	KN-7-13M-12	74
FL-5320	65	HTS-3	32	KB-10-19M-6	62	KC-6-8M-4	49	KDW-C-6-10M-9	59	KH-8-18M-6	74	KN-7-13M-6	74
FL-5324	65	HTS-3A	32	KB-104-6	62	KC-6-8M-6	49	KDW-C-7-12M-12	59	KH-8-18M-9	74	KN-7-13M-9	74
FL-5326	65	HTS-4	32	KB-105-3	62	KC-6-9M-6	49	KDW-C-7-12M-6	59	KHM-37-6	77	KN-7-14M-6	74
FL-5416	65	HTS-4A	32	KB-202-12	62	KC-7-11M-6	49	KDW-C-7-13M-12	59	KHM-38-6	77	KN-7-14M-9	74
FL-5418	65	HTS-5	32	KB-202-6	62	KC-7-12M-3	49	KDW-C-7-13M-3	59	KHM-50-6	77	KN-8-15M-12	74
FL-6124	78	HTS-6	32	KB-203-12	62	KC-7-12M-6	49	KDW-C-7-13M-6	59	KHM-50-8-6	77	KN-8-15M-3	74
FL-6128	78	HTS-7	32	KB-203-9	62	KC-7-12M-9	49	KDW-C-7-14M-6	59	KHW-C-105-12	69	KN-8-15M-6	74
FL-6324	78	HTS-8	32	KB-205-12	62	KC-7-13M-3	49	KDW-C-8-15M-9	59	KHW-C-105-6	69	KN-8-15M-9	74
FL-SH-335	65	HTS-9	32	KB-205-6	62	KC-7-13M-6	49	KH-10-19M-12	74	KHW-C-205-12	69	KN-8-16M-12	74
FL-SW-493	65	KA-103-6	55	KB-317-9	62	KC-7-13M-9	49	KH-10-19M-3	74	KHW-C-205-6	69	KN-8-16M-6	74
HA-10110XT40	113	KA-104-9	55	KB-318-12	62	KCM-25-8-6	41	KH-10-19M-6	74	KHW-C-322-6	69	KN-8-16M-9	74
HA510	46	KA-105-3	55	KB-320-6	62	KCM-37-6	41	KH-10-19M-9	74	KHW-C-409-6	69	KN-8-17M-6	74
HC-100-1/2	108	KA-105-4	55	KB-321-6	62	KCM-37-9	41	KH-104-6	68	KHW-C-43-6	69	KN-8-17M-9	74
HC-100-1/4	108	KA-105-6	55	KB-322-6	62	KD-103-6	55	KH-105-12	68	KHW-C-44-6	69	KN-8-18M-12	74
HC-100-10	108	KA-105-9	55	KB-43-6	62	KD-104-12	55	KH-105-3	68	KHW-C-45-6	69	KN-8-18M-3	74
HC-100-3/4	108	KA-205-3	55	KB-45-3	62	KD-105-3	55	KH-105-6	68	KHW-C-7-13M-6	75	KN-8-18M-6	74
HC-100-3/8 FS	108	KA-43-6	55	KB-45-4	62	KD-105-6	55	KH-202-6	68	KHW-C-7-13M-9	75	KN-8-18M-9	74
HC-100-5/16	108	KA-43-D-6	55	KB-6-10M-6	62	KD-105-D-3	55	KH-203-4	68	KHW-C-7-14M-6	75	KNCBUW-C-404-6	69
HC-100-5/8	108	KA-44-3	55	KB-7-11M-6	62	KD-205-6	55	KH-203-6	68	KHW-C-8-15M-6	75	KNCW-322-9	69
HC-100-7/16	108	KA-44-4	55	KB-7-13M-12	62	KD-41-D-3	55	KH-203-9	68	KHW-C-8-15M-9	75	KNM-37-6	77
HC-1030	114	KA-44-6	55	KB-7-13M-3	62	KD-43-6	55	KH-205-12	68	KHW-C-8-16M-6	75	KNM-38-6	77
HC-1230	114	KA-44-D-3	55	KB-7-13M-6	62	KD-43-D-3	55	KH-205-3	68	KHW-C-8-16M-9	75	KNM-50-3	77
HC-3520	109	KA-44-D-6	55	KB-7-13M-9	62	KD-44-6	55	KH-205-4	68	KHW-C-8-17M-6	75	KNM-50-6	77
HC3816	51	KA-45-3	55	KB-7-14M-6	62	KD-44-D-3	55	KH-205-6	68	KHW-C-8-17M-9	75	KNM-50-8-6	77
HC-8612-2	115	KA-45-4	55	KB-8-15M-12	62	KD-45-6	55	KH-205-D-6	68	KHW-C-8-18M-4	75	KNS-320-D-6	68
HC-8612-4	115	KA-45-6	55	KB-8-15M-6	62	KD-45-D-3	55	KH-318-4	68	KHW-C-8-18M-6	75	KNS-404-6	68
HC-8612-6	115	KA-45-9	55	KB-8-15M-9	62	KD-6-10M-12	59	KH-320-6	68	KHW-C-8-18M-9	75	KNS-8-18M-4	68
HC-8612-8	115	KA-6-10M-4	59	KB-8-16M-6	62	KD-6-10M-6	59	KH-321-6	68	KHW-C-8-18MD68.87	75	KNW-C-104-9	69
HE-100-1/2	108	KA-6-10M-6	59	KB-8-16M-9	62	KD-6-10M-9	59	KH-322-6	68	KN-10-24M-6	74	KNW-C-105-12	69
HE-100-1/4	108	KA-6-10M-9	59	KB-8-17M-12	62	KD-7-11M-12	59	KH-409-12	68	KN-104-6	68	KNW-C-105-6	69
HE-100-3/4	108	KA-7-11M-12	59	KB-8-18M-6	62	KD-7-11M-6	59	KH-409-3	68	KN-104-9	68	KNW-C-203-6	69
HE-100-3/8 FS	108	KA-7-12M-12	59	KC-101-6	47	KD-7-12M-12	59	KH-409-4	68	KN-105-12	68	KNW-C-203-9	69
HE-100-5/16	108	KA-7-12M-6	59	KC-105-6	49	KD-7-12M-6	59	KH-409-6	68	KN-105-6	68	KNW-C-205-12	69
HE-100-5/8	108	KA-7-12M-9	59	KC-25-12	49	KD-7-12M-9	59	KH-43-6	68	KN-105-9	68	KNW-C-205-6	69
HE-100-7/16	108	KA-7-13M-12	59	KC-25-3	49	KD-7-13M-12	59	KH-44-6	68	KN-202-6	68	KNW-C-318-6	69
HE-1028	63	KA-7-13M-3	59	KC-25-4	49	KD-7-13M-6	59	KH-45-3	68	KN-202-8	68	KNW-C-322-12	69
HE-1028-D	63	KA-7-13M-4	59	KC-25-6	49	KD-7-13M-9	59	KH-45-4	68	KN-203-12	68	KNW-C-322-6	69
HE-334-A-7	113	KA-7-13M-6	59	KC-25-9	49	KD-7-14M-12	59	KH-45-6	68	KN-203-6	68	KNW-C-43-6	69
HESF-26318-E10	114	KA-7-13M-9	59	KC-26-12	49	KD-7-14M-6	59	KH-540-6-8-2.75	68	KN-203-9	68	KNW-C-44-6	69
HESF-4432	114	KA-7-14M-6	59	KC-26-3	49	KD-7-14M-9	59	KH-7-13M-3	74	KN-205-12	68	KNW-C-45-6	69
HG-334-A-7	113	KA-8-15M-12	59	KC-26-6	49	KD-8-15M-12	59	KH-7-13M-4	74	KN-205-6	68	KNW-C-7-13M-6	75
HG-6840	113	KA-8-15M-3	59	KC-26-9	49	KD-8-15M-6	59	KH-7-13M-6	74	KN-205-9	68	KNW-C-7-13M-9	75
HG-6940	113	KA-8-15M-9	59	KC-27-6	49	KD-8-15M-9	59	KH-7-13M-9	74	KN-318-3	68	KNW-C-7-13M-D-3	75
HGSFNC-3028	110	KAM-37-12	61	KC-28-3	49	KDM-37-12	61	KH-7-14M-6	74	KN-318-4	68	KNW-C-7-14M-6	75
HGSFNC-3328	110	KAM-37-3	61	KC-28-6	49	KDM-37-3	61	KH-8-14M-6	74	KN-320-12	68	KNW-C-8-15M-12	75
HHSF-10748-33MM	115	KAM-38-6	61	KC-29-3	49	KDM-37-6	61	KH-8-15M-3	74	KN-322-12	68	KNW-C-8-15M-6	75
HHSF-8148-33MM	115	KAW-C-104-9	55	KC-29-6	49	KDM-37-9	61	KH-8-15M-6	74	KN-322-6	68	KNW-C-8-16M-9	75
HT-1548-D	109	KAW-C-105-6	56	KC-30-3	49	KDM-37-8-3	61	KH-8-15M-9	74	KN-322-9	68	KNW-C-8-17M-6	75
HT-848	109	KAW-C-43-6	55	KC-30-4	49	KDM-38-12	61	KH-8-16M-12	74	KN-404-6	68	KNW-C-8-17M-9	75
HT-848	109	KAW-C-44-6	55	KC-30-6	49	KDM-38-3	61	KH-8-16M-3	74	KN-41-3	68	KNW-C-8-18M-6	75
HTN-B-2	32	KAW-C-45-6	55	KC-30-9	49	KDM-38-6	61	KH-8-16M-4	74	KN-41-6	68	KNW-C-8-18M-9	75
HTN-B-3	32	KAW-C-6-10M-6	59	KC-5-7M-4	49	KDM-38-9	61	KH-8-16M-6	74	KN-43-6	68	KS-100-6	49
HTN-B-4	32	KAW-C-6-10M-9	59	KC-5-7M-6	49	KDW-C-104-12	55	KH-8-16M-9	74	KN-43-9	68	KS-102-6	49
HTS-0	32	KAW-C-7-12M-12	59	KC-6-10M-12	49	KDW-C-104-3	55	KH-8-17M-3	74	KN-44-6	68	KS-104-6	49
HTS-1	32	KAW-C-7-12M-6	59	KC-6-10M-3	49	KDW-C-105-6	55	KH-8-17M-4	74	KN-45-6	68	KS-105-6	49
HTS-10	32	KAW-C-7-13M-12	59	KC-6-10M-4	49	KDW-C-43-6	55	KH-8-17M-6	74	KN-45-9	68	KS-105-9	49

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
KS-25-6	49	KT-8-18M-12	62	M13MM21	49	M3014	52	M-498	34	M6N-0810-5	37	M-8MM43	57
KS-26-12	49	KT-8-18M-6	62	M-13MM23	57	M3016	52	M4MME1	49	M6N-0810-6	37	M8MME1	47
KS-26-6	49	KT-8-18M-9	62	M-13MM25	71	M3018	52	M5.5MM11	49	M6N-0810-8	37	M-8MME3	58
KS-28-12	49	L-320X	16	M-13MM25	71	M3108	52	M5.5MME1	49	M6N-08-10M-10	37	M9MM11	47
KS-28-6	49	L-322X	16	M-13MM43	57	M3109	52	M-5110	64	M6N-08-10M-12	37	M-9MM13	57
KS-29-6	49	L-328X	16	M-13MM45	70	M3110	52	M-5112	64	M6N-08-10M-3	37	M9MM21	47
KS-30-6	49	MBNC-3512	102	M13MME1	47	M3112	52	M-5114	64	M6N-08-10M-4	37	M9MME1	47
KS-5-7M-6	49	MDA-10MM-NC	101	M-13MME3	58	M3114	52	M-5116	64	M6N-08-10M-6	37	MB10MM21	47
KS-5-7M-9	49	MNC-3114	102	M-13MME5	72	M3116	52	M-5118	64	M6N-08-10M-8	37	MB-10MM23	57
KS-6-10M-6	49	MNC6N-08-10M-3	101	M-14MM03	57	M3118	52	M-5120	64	M6N-0811-2	37	MB-10MM23-D	57
KS-6-10M-9	49	MNC6N-08-10M-4	101	M14MM11	49	M3120	52	M-5122	64	M6N-0811-3	37	MB-10MM25	71
KS-6-8M-6	49	MNC6N-08-10M-6	101	M-14MM15	70	M-320X	16	M-5124	64	M6N-0812-10	37	MB-10MM25	71
KS-6-8M-9	49	MNC6N-08-10M-6	101	M-14MM43	57	M3212	53	M-5216	65	M6N-0812-12	37	MB-10MM33	57
KS-7-11M-6	49	MNC6N-08-10M-8	101	M-14MM45	70	M3216	53	M-5218	65	M6N-0812-2	37	MB11MM21	47
KS-7-13M-6	49	MNC6N-08-22M-4	101	M-14MM55	71	M-322X	16	M-5316	65	M6N-0812-3	37	MB-11MM23	57
KS-7-13M-9	49	MNC6N-08-8M-4	101	M-1500-P	39	M-328X	16	M-5416	65	M6N-0812-4	37	MB-11MM33	57
KSM-25-3	41	M10MM11	49	M-1505-P	39	M-32-TX-15	18	M-5418	65	M6N-0812-6	37	MB-1206	45
KSM-25-6	41	M-10MM13	57	M-15MM03	57	M-32-TX-20	18	M-5420	65	M6N-0812-8	37	MB-1208	45
KSM-25-8	41	M-10MM13-D	57	M15MM11	49	M3408	52	M-5512	65	M6N-08-12M-10	37	MB-1209	45
KSM-25-9	41	M-10MM15	70	M-15MM13	57	M3410	52	M-5518	65	M6N-08-12M-12	37	MB-1210	45
KSM-37-6	41	M10MM21	49	M-15MM15	70	M3411	52	M5E10	66	M6N-08-12M-3	37	MB-1211	45
KSM-37-8-6	41	M-10MM23	57	M-15MM25	71	M3412	52	M5E12	66	M6N-08-12M-4	37	MB-1212	45
KT-10-19M-6	62	M-10MM43	57	M-15MM25	71	M3414	52	M5E14	66	M6N-08-12M-6	37	MB-1214	45
KT-104-6	62	M10MME1	49	M-15MM43	57	M3416	52	M5E16	66	M6N-08-12M-8	37	MB-1216	45
KT-105-12	62	M-10MME3	58	M-15MM45	70	M3418	52	M5E18	66	M6N-0814-10	37	MB-1218	45
KT-105-6	62	M-1105	44	M-15MM55	71	M3424	52	M5MM11	47	M6N-0814-12	37	MB12MM21	47
KT-105-9	62	M-1106	44	M-15MME5	72	M3426	52	M5MME1	47	M6N-0814-2	37	MB-12MM23	57
KT-202-12	62	M-1107	44	M-15-SC	39	M3514	53	M5P10	66	M6N-0814-3	37	MB-12MM23-D	57
KT-202-6	62	M-1108-E	44	M-15-SC-A	39	M3E08	54	M5P12	66	M6N-0814-4	37	MB-12MM25	71
KT-202-9	62	M-1110	44	M-16MM13	57	M3E10	54	M5P14	66	M6N-0814-6	37	MB-12MM25	71
KT-203-12	62	M-1112	44	M-16MM15	70	M3E14	54	M5P16	66	M6N-0814-8	37	MB-12MM33	57
KT-203-6	62	M-1114	44	M-17MM13	57	M3E16	54	M5P18	66	M6N-08-14M-10	37	MB-1308	47
KT-203-9	62	M-1116	44	M-17MM15	70	M3P06	54	M-610	34	M6N-08-14M-12	37	MB-1311	47
KT-205-12	62	M-1118	44	M-18MM03	57	M3P07	54	M-630	34	M6N-08-14M-8	37	MB-1312	47
KT-205-6	62	M-11MM03	57	M-18MM13	57	M3P08	54	M-638	34	M6N-0816-10	37	MB-1314	47
KT-317-9	62	M11MM11	49	M-18MM15	70	M3P10	54	M6MM11	47	M6N-0816-12	37	MB13MM21	47
KT-318-6	62	M-11MM13	57	M-18MM25	71	M3P12	54	M-6MM13	57	M6N-0816-2	37	MB-13MM23	57
KT-320-12	62	M-11MM15	70	M-18MM25	71	M3P14	54	M6MM21	47	M6N-0816-3	37	MB-13MM23-D	57
KT-320-6	62	M11MM21	49	M-18MM45	70	M3P16	54	M6MME1	47	M6N-0816-8	37	MB-13MM25	71
KT-320-9	62	M-11MM43	57	M-19MM15	70	M3P18	54	M-6MME3	58	M6N-0818-2	37	MB-13MM25	71
KT-322-6	62	M11MME1	49	M1A08	45	M-44-90	34	M6N-0806-10	37	M6N-08-8M-10	37	MB-13MM33	57
KT-322-9	62	M-11MME3	58	M1E06	45	M-450	35	M6N-0806-2	37	M6N-08-8M-12	37	MB14MM21	47
KT-44-6	62	M-1208	45	M1E07	45	M-460	35	M6N-0806-3	37	M6N-08-8M-3	37	MB-14MM23	57
KT-6-10M-12	62	M-1209	45	M1E08	45	M-470	35	M6N-0806-5	37	M6N-08-8M-4	37	MB-14MM23-D	57
KT-6-10M-6	62	M-1210	45	M1E10	45	M-480	34	M6N-0806-6	37	M6N-08-8M-6	37	MB-14MM25	71
KT-6-10M-9	62	M-1212	45	M1E11	45	M-480-6	34	M6N-0806-8	37	M6N-08-8M-8	37	MB-14MM25	71
KT-7-13M-6	62	M-1214	45	M1E12	45	M-488	34	M6N-0808-10	37	M7MM11	47	MB-14MM33	57
KT-7-13M-9	62	M12MM11	49	M1E14	45	M-490	34	M6N-0808-12	37	M-7MM13	57	MB15MM21	47
KT-7-14M-12	62	M-12MM13-D	57	M1E16	45	M-490-10	34	M6N-0808-2	37	M7MM21	47	MB-15MM23	57
KT-7-14M-6	62	M-12MM15	70	M1P06	45	M-490-16	34	M6N-0808-3	37	M7MME1	47	MB-15MM25	71
KT-7-15M-6	62	M12MM21	49	M1P07	45	M-490-2	34	M6N-0808-4	37	M-7MME3	58	MB-15MM25	71
KT-8-15M-12	62	M-12MM43	57	M1P09	45	M-490-2-OR	34	M6N-0808-5	37	M-825	35	MB-15MM33	57
KT-8-15M-6	62	M-12MM43-D	57	M1P10	45	M-490-6	34	M6N-0808-6	37	M-838	35	MB16MM21	47
KT-8-15M-9	62	M-12MM55	71	M1P11	45	M-490-8	34	M6N-0808-8	37	M-855	35	MB-16MM23	57
KT-8-16M-12	62	M12MME1	49	M1P12	45	M-490-NR	34	M6N-0810-10	37	M-858	35	MB-16MM25	71
KT-8-16M-6	62	M-13MM03	57	M1P14	45	M-490-OR	34	M6N-0810-12	37	M8MM11	47	MB-16MM25	71
KT-8-16M-9	62	M13MM11	49	M1P16	45	M-495	34	M6N-0810-2	37	M-8MM13	57	MB-17MM23	57
KT-8-17M-12	62	M-13MM13	57	M-21MM15	70	M-495-5	34	M6N-0810-3	37	M8MM21	47	MB-17MM25	71
KT-8-17M-6	62	M-13MM15	70	M3012	52	M-497	34	M6N-0810-4	37	M-8MM23	57	MB-17MM25	71

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
MB-18MM23	57	MDA-7MM	37	MSF-13MM15	71	NC-3018	102	NC-EX-254-B	101	NC-M-10MM21-NY	103	NC-SF-5116	102
MB-18MM25	71	MDAT-08	36	MSF-16MM15	71	NC-3018-NY	102	NC-EX-255-6	101	NC-M-13MM21	103	NC-SF-5316	102
MB-18MM25	71	MDB-08	36	MSF-17MM45	71	NC-3024	102	NC-EX-257-12-NY	101	NC-M-14MM13	103	NC-SF-5418	102
MB3210	53	MDB-10	36	MSF-18MM15	71	NC-3028	102	NC-EX-257-2	101	NC-M-17MM13-D	103	NC-SF-5424	102
MB3212	53	MDB-12	36	MSH-336	64	NC-3108	102	NC-EX-257-3	101	NC-M-18MM16	103	NC-TX-1105	103
MB3214	53	MDB-14	36	MSH-400	107	NC-3112	102	NC-EX-257-8	101	NC-M-3112	102	NC-TX-1108	103
MB3216	53	MDC-08	36	MSW343	52	NC-3114	102	NC-EX-260-2	101	NC-M-6MM13	103	NC-TX-3106	103
MB3218	53	MDC-10	36	MSW-350	107	NC-3114-D	102	NC-EX-260-4	101	NC-M-6MM21	103	NC-TX-3107	103
MB3220	53	MDC-12	36	MSW604	52	NC-3120	102	NC-EX-370-8	101	NC-M6N-0810-6	101	NC-TX-3112	103
MB3314	53	MET-1301C	111	MSW-90	107	NC-3208	102	NC-EX-372	101	NC-M-8MM43	103	NC-TX-3407	103
MB3318	53	MET-1302C	111	MSW-90-B	107	NC-3212	102	NC-EX-374-B	101	NC-MB-10MM21	103	NC-TX-3410	103
MB3512	53	MET-1401C	111	MSW-984	107	NC-3220	102	NC-EX-376-3	101	NC-MB-11MM33-NY	103	NC-TX-5110	103
MB3514	53	MET-1402C	111	MSW-984-B	107	NC-3224	102	NC-EX-376-4-NY	101	NC-MB-13MM21	103	NC-TX-5112	103
MB3516	53	MET-1600C	111	MTX-1110	48	NC-3228	102	NC-EX-377-3	101	NC-MB-13MM23-NY	103	NC-TX-5114	103
MB5.5MM21	47	MET-1800C	111	MTX-1405	48	NC-3310	102	NC-EX-377-B-2	101	NC-MB-13MM33-NY	103	NC-TX-5116	103
MB-5212	65	MF25	50	MTX-3112	60	NC-3312	102	NC-EX-380-4	101	NC-MB-14MM23	103	NC-TX-5118	103
MB-5214	65	MF25B	50	MTX-3410	60	NC-3316	102	NC-EX-500-3	101	NC-MB-15MM23-NY	103	NC-TX-5120	103
MB-5216	65	MF-27	61	MTX-3412	60	NC-3316-NY	102	NC-EX-500-4	101	NC-MB-16MM23	103	NC-TX-5408	103
MB-5220	65	MF-27-B	61	MTX-5118	75	NC-3320	102	NC-EX-500-6	101	NC-MB-16MM25	103	NC-TX-5414	103
MB5MM21	47	MF-37	61	MTX-5118	75	NC-3324	102	NC-EX-500-B-4	101	NC-MB-3314	102	NC-TX-7120	103
MB6MM21	47	MF-37-B	61	MVA-20-7MM	47	NC-3326-D	102	NC-EX-501-10-NY	101	NC-MB-5.5MM21	103	NC-TX-7124	103
MB-6MM23	57	MF-38	61	MVC-116-16MM	109	NC-3411	102	NC-EX-501-12-NY	101	NC-MB-6MM21	103	NC-TXC-2708	103
MB6N-08-10M-12	38	MF-38-B	61	MVC-117-16MM	109	NC-3414	102	NC-EX-501-15-NY	101	NC-MBSF-18MM25-NY	103	NC-WJ-1271	102
MB6N-08-10M-14	38	MF-39	77	MVC-262-14MM-8.75	109	NC-3428	102	NC-EX-501-5	101	NC-MRQR8-108-10MM	101	NC-WJ-1271-M6X1.0	102
MB6N-08-10M-2	38	MF-39B	77	MVC-265-14MM	109	NC-3512-NY	102	NC-EX-501-B-NY	101	NC-MSF-16MM35-NY	103	NC-WJ-1271-M7X1.0	102
MB6N-08-10M-4	38	MF-50	77	MVC-272-14MM	109	NC-3514-NY	102	NC-EX-502-6	101	NC-MSF-18MM15-NY	103	NC-WJ-1271-M8X1.0	102
MB6N-08-10M-5	38	MF-50B	77	MVC-487-10MM-D	57	NC-3518	102	NC-EX-502-8	101	NC-MTX-3112	103	NC-WJ-1271-M8X1.25	102
MB6N-08-10M-8	38	MF-51	79	MVC-693-13MM	57	NC-490-3	101	NC-EX-504	101	NC-MTX-5116-NY	103	NCW-M-13MM23	103
MB6N-08-10M-D-6	38	MF-55	77	MVCCBC-248-14MM-4	113	NC-490-4	101	NC-EX-504-B	101	NC-MTX-5118-NY	103	NM-320X	16
MB6N-08-12M-10	38	MF-55B	77	MVCCBC-284-12MM-5	115	NC-490-9	101	NC-EX-505	101	NC-MTX-5120-NY	103	NOL-320X	16
MB6N-08-12M-4	38	MF-62	79	MVCCBC-284-12MM-9	113	NC-5112	102	NC-EX-505-B	101	NCO-6N-08-6M-5	101	NP-32-TX-25	18
MB6N-08-12M-6	38	MF-62B	79	MVCCBC-284-12MM-9	115	NC-5116	102	NC-EX-506	101	NCO-6N-08-7M-3	101	ORNC-EX-755-10	101
MB6N-08-12M-8	38	MF-70	77	MVCFL-147-15MM	113	NC-5128	102	NC-EX-506-B	101	NCO-6N-08-8M-3	101	ORNC-EX-755-6	101
MB6N-08-13M-6	38	MF-70B	77	MVE-332-14MX12M	114	NC-5128-A	102	NC-EX-507-2	101	NCO-6N-08-8M-4	101	OSMB-8MM23-NC	103
MB6N-08-14M-4	38	MF-75	83	MVECBU-131-12MM	115	NC-5132	102	NC-EX-507-3	101	NCO-6N-08-8M-5	101	OL-322X	16
MB6N-08-8M-4	38	MF-75B	83	MVESF-126-16MM	71	NC-5134	102	NC-EX-507-6	101	NCO-EX-755-10	101	OOL-322X	16
MB6N-08-8M-6	38	MF-76	83	MVFCB-137-19MM	115	NC-5140	102	NC-EX-510-19.5-NY	101	NCO-M-8MM43	103	OOL-322X	16
MB7MM21	47	MF-76B	83	MVFCB-68-17MM	115	NC-5140-D	102	NCEX-510-19.688NY	101	NCO-MB-6MM23	103	OS-10MM11	46
MB-7MM23	57	MF-77-B	85	MVM-11-10MM	37	NC-5152-D	102	NC-EX-510-4	101	NC-OSMB-10MM23	103	OS-10MM23	56
MB8MM21	47	MF-82-B	85	MX-1108	44	NC-5212	102	NC-EX-510-6	101	NCO-TX-3105	103	OS-10MM23-D	56
MB-8MM23	57	MFL-1000	109	MX-1108-E	44	NC-5220	102	NC-EX-510-8	101	NCO-TX-3414	103	OS-10MM43-D	56
MB9MM21	47	MFL-1000	109	MX-1109	44	NC-5230	102	NC-EX-625	101	NC-QR-108	101	OS3410	51
MB-9MM23	57	MFL-250	109	MX-1110	44	NC-5320	102	NC-EX-628-14	101	NC-QR-308	101	OS-5424	63
MBVA-6-12MM10MM	114	MFL-250	109	MX-1111	44	NC-5424	102	NC-EX-751-B	101	NC-QR-508	101	OS-5516	64
MBVC-41-12MM	113	MHA-1310	44	MX-1112	44	NC-5428-D	102	NC-EX-753	101	NC-QR-514	101	OS-5518	64
MBVC-41-12MM	115	MHA-4108	44	MZA-110	108	NC-5436	102	NC-EX-753-B	101	NC-QR-520	101	OSM-10MM13	57
MBVC-41-12MM-A	113	MHA-510	44	MZA-310	108	NC-5528	102	NC-EX-755-10	101	NC-QR-720	101	OSM-10MM43-D	57
MBVC-41-12MM-B	113	MHC3816	52	MZA-314	108	NC-5626	102	NC-EX-755-12	101	NC-SC-108	101	OSM3410	52
MBVC-41-12MM-B	115	MHM-10MM	36	MZA-510	108	NC-7130	102	NC-EX-755-15	101	NC-SC-308	101	OSM3414	52
MBVCCBC-249-14MM-8	113	MHM-1310	36	MZA-514	108	NC-7136	102	NC-EX-755-3	101	NC-SC-308-2344A	101	OSMB10MM21	47
MBVCCBC323-12M120M	115	MHM-1710-2	37	MZN-312	108	NC-7324	102	NC-EX-755-4	101	NC-SC-308-425A	101	OSMB-10MM23	57
MBVE-338-14MM	113	MHM-1710-4	37	MZN-314	108	NC-7524	102	NC-EX-755-6	101	NC-SC-308-675A	101	OSMB-10MM23-D	57
MDA-08	36	MHM-1912	36	MZN-514	108	NC-8148-NY	102	NC-EX-755-8	101	NC-SC-314	101	OSMB-8MM23	57
MDA-10	36	MHM-7MM	36	NCVCF-107-16MM	109	NC-8224	102	NC-EX-755-B-6	101	NC-SC-508	101	OSSF-10MM23	58
MDA-10MM	37	MHM-8MM	36	NC-1112	102	NC-8636	102	NC-EX-755-B-8	101	NC-SC-514	101	OSSF-10MM43	58
MDA-10MM-80M	37	MNC-1208	102	NC-1212	102	NC-EX-1003-18	101	NC-EX-756-10	101	NC-SC-514-4032	101	OSSF-3512	53
MDA-12	36	MR7MME1	47	NC-1308-D-NY	102	NC-EX-251-10	101	NC-EX-757-3	101	NC-SF-5110	102	OSSF-3514	53
MDA-14	36	MRVC-309-10MM	113	NC-3010	102	NC-EX-251-6	101	NC-EX-758-4	101	NC-SF-5112	102	OSSF-8MM23	58
MDA-6MM	37	MSF-10MM13	58	NC-3014	102	NC-EX-254	101	NC-M-10MM15	103			P-1409	29

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
P-1410	29	SA-120	67	SA-407	67	SA-C-510	68	SD-5597-2P-T30-6	110	SF-12MM43	58	SF-18MM37	81
P-1412	29	SA-120-D	54	SA-409	67	SA-C-510-21M	73	SD-5597-2P-T30-8	110	SF-12MM45	71	SF-18MM43	58
P-1414	29	SA-122	54	SA-409-D	67	SA-C-510-22M	73	SD-5609-7-64-BH	112	SF13MM11	47	SF-18MM45	71
P-1416	29	SA-122-D	54	SA-410	67	SA-C-57-13M	73	SD-5621	110	SF-13MM13	58	SF-18MM47	81
P-2010	29	SA-123	54	SA-411	67	SA-C-57-14M	73	SD-5630-2.5MM-BH	112	SF-13MM15	71	SF-18MM55	72
P-2012	29	SA-123-D	54	SA-501	67	SA-C-58-15M	73	SD-5734-BH	112	SF13MM21	47	SF-19MM13	58
P-2014	29	SA-124	54	SA-505	67	SA-C-58-16M	73	SD-5759	110	SF-13MM23	58	SF-19MM15	71
P-2016	29	SA-124-D	54	SA-508	67	SA-C-58-17M	73	SD-5786-BH	112	SF-13MM25	72	SF-19MM16	79
P-320X	16	SA-125	54	SA-510	67	SA-C-58-18M	73	SD-5790-BH	112	SF-13MM33	58	SF-19MM17	81
P-322X	16	SA-125-D	54	SA-510-19M	73	SC-108	35	SD-5809-10M-4-BH	112	SF-13MM35	72	SF-19MM23	58
P-328X	16	SA156M	48	SA-510-20M	73	SC-308	35	SD-5809-10M-4-BH-B	112	SF-13MM43	58	SF-19MM25	72
QR-108	36	SA157M	48	SA-510-21M	73	SC-314	27	SD-5809-10M-6-BH	112	SF-13MM45	71	SF-19MM35	72
QR-308	36	SA1610M	48	SA-510-22M	73	SC-314	28	SD-5809-10M-6-BH-B	112	SF-13MM55	72	SF-19MM36	79
QR-314	36	SA168M	48	SA-510-24M	73	SC-314	35	SD-5809-10M-8-BH	112	SF-14MM13	58	SF-19MM43	58
QR-508	36	SA-200	54	SA-535	81	SC-508	35	SD-5809-10M-8-BH-B	112	SF-14MM15	71	SF-19MM45	71
QR-514	36	SA-201	54	SA-537	81	SC-514	27	SD-5809-8M-4-BH	112	SF-14MM25	72	SF-19MM55	72
QR-520	36	SA-202	54	SA-538	81	SC-514	28	SD-5809-8M-4-BH-B	112	SF-14MM35	72	SF-20MM15	71
QR-614	36	SA-202-D	54	SA-57-13M	73	SC-514	35	SD-5810-12M-4-BH	113	SF-14MM45	71	SF-21MM15	71
QR-620	36	SA-203	54	SA-57-14M	73	SC-520	27	SD-5810-12M-4-BH-B	112	SF-14MM55	72	SF-21MM16	79
QR-714	36	SA-203-D	54	SA-58-15M	73	SC-520	35	SD-5810-12M-6-BH	113	SF-15MM03	58	SF-21MM17	81
QR-720	36	SA-205	54	SA-58-16M	73	SC-614	35	SD-5810-12M-6-BH-B	112	SF15MM11	47	SF-21MM25	72
QR-824	36	SA-205-D	54	SA-58-17M	73	SC-620	35	SD-5810-12M-8-BH	113	SF-15MM13	58	SF-21MM35	72
QRA-08	36	SA-216	67	SA-58-18M	73	SC-720	27	SD-5810-12M-8-BH-B	112	SF-15MM15	71	SF-21MM36	79
QRA-14	36	SA-216-D	67	SA-601	81	SC-720	35	SD-5810-14M-4-BH	113	SF-15MM16	79	SF-21MM37	81
QRF-08	36	SA-217	67	SA-603	81	SC-724	35	SD-5810-14M-4-BH-B	112	SF-15MM17	81	SF-21MM45	71
QRF-14	36	SA-217-D	67	SA-604	81	SC-728	35	SD-5810-14M-8-BH	113	SF-15MM23	58	SF-21MM55	72
QRF-20	36	SA-218	67	SA-606	81	SC-820	35	SD-5810-14M-8-BH-B	112	SF-15MM25	72	SF-22MM15	71
QR-M-490-2	34	SA-218-D	67	SA-607	81	SC-828	35	SD-5814-4M-4-BH	112	SF-15MM33	58	SF-22MM16	79
QR-M-490-200M	34	SA-219	67	SA-609	81	SD-1342-2	12	SD-5814-4M-4-BH-B	112	SF-15MM35	72	SF-22MM25	72
QR-M-490-A	34	SA-219-D	67	SA-610	81	SD-1055-A	10	SD-5814-6M-4-BH	112	SF-15MM36	79	SF-22MM35	72
QR-M-490-A6	34	SA-221	67	SA-65	46	SD-1474-D	11	SD-5814-6M-4-BH-B	112	SF-15MM43	58	SF-22MM36	79
R-320X	16	SA-221-D	67	SA-712	81	SD-1975-B	11	SF-10MM03	58	SF-15MM45	71	SF-22MM37	81
R-321X	16	SA-25	46	SA-715	81	SD-2052-10	11	SF10MM11	47	SF-15MM55	72	SF-22MM55	72
R-322X	16	SA-25-D	46	SA-716	81	SD-2052-8	11	SF-10MM13	58	SF-16MM13	58	SF-23MM15	71
R-328X	16	SA-26	46	SA-718	81	SD-3138	107	SF-10MM15	71	SF-16MM15	71	SF-24MM15	71
R-32-TX-27	18	SA-26-D	46	SA-C-120	55	SD-4429	11	SF10MM21	47	SF-16MM16	79	SF-24MM16	79
RM-490	34	SA-28	46	SA-C-122	55	SD-4496-2	11	SF-10MM23	58	SF-16MM17	81	SF-24MM17	81
RM-490-4	34	SA-28-D	46	SA-C-123	55	SD-4739	12	SF-10MM25	72	SF-16MM25	72	SF-24MM25	72
RM-490-6	34	SA-29	46	SA-C-205	55	SD-4984-10IP	20	SF-10MM33	58	SF-16MM35	72	SF-24MM35	72
RMBVC-272-12MM-D	113	SA-29-D	46	SA-C-216	68	SD-5073	107	SF-10MM35	72	SF-16MM45	71	SF-24MM36	79
RP-520	27	SA-30	46	SA-C-217	68	SD-5160	112	SF-10MM43	58	SF-16MM55	72	SF-24MM37	81
RP-520	28	SA-302	54	SA-C-218	68	SD-5187	107	SF-10MM45	71	SF-17MM03	58	SF-24MM38	84
RP-720	27	SA-305	54	SA-C-219	68	SD5197	107	SF-10MM55	72	SF-17MM15	71	SF3010	53
RP-720	28	SA-306	54	SA-C-221	68	SD-5206	11	SF1112	45	SF-17MM16	79	SF3012	53
RP-728	27	SA-30-D	46	SA-C-305	55	SD-5284	18	SF1116	45	SF-17MM17	81	SF3014	53
RP-820	27	SA-316	67	SA-C-306	55	SD-5413	11	SF-11MM13	58	SF-17MM23	58	SF3016	53
RP-828	27	SA-317	67	SA-C-321	68	SD-5482	110	SF-11MM15	71	SF-17MM25	72	SF3018	53
RP-828	28	SA-318	67	SA-C-322	68	SD-5522	110	SF-11MM23	58	SF-17MM35	72	SF3110	53
RP-848	27	SA-318-D	67	SA-C-36-10M	59	SD-5522-T25-T25	110	SF-11MM25	72	SF-17MM43	58	SF3112	53
SMNC68-08-10M-4	101	SA-320	67	SA-C-37-12M	59	SD-5522-T30-T30	110	SF-11MM43	58	SF-17MM45	71	SF3114	53
SMNC68-08-10M-6	101	SA-321	67	SA-C-37-13M	59	SD-5536-BH	112	SF-11MM45	71	SF-17MM55	72	SF3116	53
SWMSF-12MM13-NC	103	SA-321-D	67	SA-C-37-14M	59	SD-5537-BH	112	SF-11MM55	72	SF-18MM13	58	SF3118	53
SWMSF-12MM23-NC	103	SA-322	67	SA-C-38-15M	59	SD-556	11	SF-12MM03	58	SF-18MM15	71	SF3120	53
SWMSF-7MM23-NC	103	SA-322-D	67	SA-C-38-18M	59	SD-5560	19	SF-12MM13	58	SF-18MM16	79	SF-3212	53
S-320X	16	SA-402	67	SA-C-407	68	SD-556-A	11	SF-12MM15	71	SF-18MM17	81	SF-3214	53
S-321X	16	SA-402-D	67	SA-C-409	68	SD-5585	26	SF12MM21	47	SF-18MM23	58	SF-3216	53
S-328X	16	SA-404	67	SA-C-410	68	SD-5586	110	SF-12MM23	58	SF-18MM25	72	SF-3218	53
S-32-TX-30	18	SA-404-D	67	SA-C-411	68	SD-5597-2P-5MM-6	110	SF-12MM25	72	SF-18MM35	72	SF-3224	53
SA-120	54	SA-406	67	SA-C-508	68	SD-5597-2P-5MM-8	110	SF-12MM35	72	SF-18MM36	79	SF-3314	53



### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
SF-3316	53	SF-6324	78	SI-935-12MXM8	107	SZ-16-A-3	27	SZ-5-7-6MM	28	TN-24	111	TX-5116	75
SF-3318	53	SF-6326	78	SI-935-14MX7/16	107	SZ-16-A-4	27	SZ-5-7-8MM	28	TW-0	31	TX-5118	75
SF-3320	53	SF-6328	78	SI-935-14MXM10	107	SZ-17	27	SZ-7	27	TW-1	31	TX-5120	75
SF-3324	53	SF-6330	78	SI-935-17MXM12	107	SZ-17-A	27	SZ-7-10-10MM	28	TW-2	31	TX-5124	75
SF3412	53	SF-6424	78	SI-935-17MXM8	107	SZ-18	27	SZ-7-10-12MM	28	TW-3	31	TX-5408	75
SF3414	53	SF-6524	78	SI-935-3/8 FS	107	SZ-18-A	27	SZ-7-10-14MM	28	TW-4	31	TX-5410	75
SF3416	53	SF8MM11	47	SI-935-5/16	107	SZ-19	27	SZ-7-10-17MM	28	TW-5	31	TX-5412	75
SF3418	53	SF-8MM13	58	SI-935-7/16	107	SZ-19-A	27	SZ-7-10MM	28	TW-6	32	TX-5414	75
SF3432	53	SF-8MM23	58	SI-935-8MXM5	107	SZ-19-A-BH	112	SZ-7-10MM-BH	112	TW-7	32	TX-5416	75
SF-3512	53	SF-8MM25	72	SW-282	63	SZ-20	27	SZ-7-4MM	28	TWA-6	32	TX-5418	75
SF-3514	53	SF-8MM33	58	SW-282-D	63	SZ-21	27	SZ-7-5MM	28	TWA-7	32	TX-5420	75
SF-3516	53	SFHC3816	53	SW-350	107	SZ-22	27	SZ-7-6MM	28	TWB-6	31	U-321X	16
SF-3518	53	SF-HE-9518	65	SW-493	64	SZ-23	27	SZ-7-6MM-BH	112	TWB-7	31	UG-10EP13	93
SF-5112	65	SF-SH-335	65	SWMHCSF-7320	109	SZ-24	27	SZ-7-6MM-BH-1125	112	TWB-8	31	UG-10MM03	94
SF-5116	65	SF-SH-336	65	SWMVCSF-114-16MM	109	SZ-25	27	SZ-7-6MM-BH-1375	112	TWD-0	31	UG-10MM11	92
SF-5118	65	SF-SW-282	65	SWMVESF-122-16MM	109	SZ-26	27	SZ-7-6MM-BH-2375	112	TWD-2	31	UG-10MM11-D	92
SF-5120	65	SH-335	63	SWMVESFNC-122-16MM	109	SZ-27	27	SZ-7-8MM	28	TWD-4	31	UG-10MM13	94
SF-5122	65	SH-336	63	SWMVM-10-7MX2QD	113	SZ-30	27	SZ-7-8MM-BH	112	TWD-4-ACR	31	UG-10MM13-D	94
SF-5124	65	SH-336-D	63	SWMVM-22-8MX2QD	113	SZ-30-A	27	SZ-7-A	27	TWD-5	31	UG-10MM21	92
SF-5126	65	SH-338	63	SZ-10	27	SZ-31	27	SZ-80	27	TWD-5-ACR	31	UG-10MM21-D	92
SF-5128	65	SH-338-D	63	SZ-101	27	SZ-31-A	27	SZ-8-14-17MM	28	TWD-6	31	UG-10MM23	94
SF-5130	65	SH-339	63	SZ-10-10MM	28	SZ-31-A	27	SZ-8-14-19MM	28	TWD-7	31	UG-10MM23-D	94
SF-5132	65	SH-402	107	SZ-10-12MM	28	SZ-32	27	SZ-8-14-22MM	28	TWE-4	31	UG-10MM33	94
SF-5134	65	SH-404	107	SZ-10-14MM	28	SZ-32-A	27	SZ-8-14-24MM	28	TWE-5	31	UG-10MM43	94
SF-5212	65	SH-412	107	SZ-10-14MM	28	SZ-32-A	27	SZ-8-14-27MM	28	TX1104	48	UG-10MM43-D	94
SF-5216	65	SH-414	107	SZ-10-17MM	28	SZ-33	27	SZ-85	27	TX1105	48	UG-10MM63	94
SF-5218	65	SH-57	107	SZ-10-17MM	28	SZ-33-A	27	SZ-85-A	27	TX1106	48	UG-10MM63-D	94
SF-5222	65	SH-57-3	107	SZ-10-17MM-BH	112	SZ-33-A	27	SZ-86	27	TX1108	48	UG-10MME1	92
SF-5224	65	SH-57-4	107	SZ-10-18MM-BH-3750	112	SZ-34	27	SZ-87	27	TX1110	48	UG-1104	92
SF-5226	65	SH-57-6	107	SZ-10-19MM	28	SZ-34-A	27	SZ-88	27	TX-1112	48	UG-1105	92
SF-5228	65	SH-57-8	107	SZ-101-A	27	SZ-35	27	SZ-89	27	TX1404	48	UG-1107	92
SF-5230	65	SH-59	107	SZ-10-A	27	SZ-35-A	27	SZ-9	27	TX1405	48	UG-1107-D	92
SF-5232	65	SH-59-3	107	SZ-11	27	SZ-36	27	SZ-91	27	TX1406	48	UG-1108	92
SF-5318	65	SH-59-4	107	SZ-11-A	27	SZ-36-A	27	SZ-9-A	27	TX1407	48	UG-1108-D	92
SF-5320	65	SH-59-6	107	SZ-11-A-3	27	SZ-37	27	SZ-TX-100-A	17	TX1408	48	UG-1110	92
SF-5324	65	SH-629	107	SZ-12	27	SZ-3-7-10MM	28	SZ-TX-55-A	17	TX1410	48	UG-1110-D	92
SF-5328	65	SH-629-5	107	SZ-12-A	27	SZ-3-7-4MM	28	SZ-TX-60-A	17	TX1411	48	UG-1111	92
SF-5330	65	SH-629-6	107	SZ-12-A-2	27	SZ-3-7-5MM	28	SZ-TX-70-A	17	TX1412	48	UG-1111-D	92
SF-5412	65	SH-629-P	107	SZ-12-A-3	27	SZ-3-7-6MM	28	SZ-TX-70-A-3	17	TX1E05	48	UG-1112	92
SF-5414	65	SH-629-P-4	107	SZ-12-A-6	27	SZ-3-7-8MM	28	SZ-TX-80-A	17	TX1E06	48	UG-1112-D	92
SF-5416	65	SI-241	116	SZ-13	27	SZ-37-A	27	SZ-TX-90-A	17	TX1E08	48	UG-1113	92
SF-5418	65	SI-349	116	SZ-13-A	27	SZ-38	27	TXNC-5114	103	TX-3107	60	UG-1114	92
SF-5420	65	SI-350	116	SZ-13-A-3	27	SZ-38-A	27	T-320X	16	TX-3108	60	UG-1114-D	92
SF-5422	65	SI-351	116	SZ-14	27	SZ-39-A	27	T-321X	16	TX-3110	60	UG-1116	92
SF-5424	65	SI-352	116	SZ-14-17MM	28	SZ-41	27	TH-250	41	TX-3112	60	UG-1116-D	92
SF-5426	65	SI-360	116	SZ-14-19MM	28	SZ-42	27	TH-256	41	TX-3114	60	UG-1120	92
SF-5514	65	SI-361	116	SZ-14-22MM	28	SZ-43	27	TH-257	111	TX-3116	60	UG-11MM11	92
SF-5516	65	SI-362	116	SZ-14-24MM	28	SZ-44	27	TH-370	41	TX-3406	60	UG-11MM11-D	92
SF-5518	65	SI-364	116	SZ-14-27MM	28	SZ-5-10-14MM	28	TH-372	41	TX-3407	60	UG-11MM13	94
SF-5520	65	SI-375	116	SZ-14-A	27	SZ-5-10-17MM	28	TH-377	111	TX-3408	60	UG-11MM15	97
SF-5524	65	SI-379	116	SZ-14-A-3	27	SZ-5-10-19MM	28	TH-378	111	TX-3410	60	UG-11MM21	92
SF-5526	65	SI-380	116	SZ-14-A-4	27	SZ-55IP-AX	17	TH-411	41	TX-3412	60	UG-11MM23	94
SF-5528	65	SI-55	116	SZ-15	27	SZ-55IP-AX	20	TH-412-A	41	TX-3414	60	UG-11MM23-D	94
SF-5532	65	SI-66	116	SZ-15-A	27	SZ-5-7-10MM	28	TH-412-A-D	41	TX-3508	60	UG-1208	92
SF-6118	78	SI-67	116	SZ-15-A-2	27	SZ-5-7-12MM	28	TH-501	111	TX-3E08	60	UG-1209	92
SF-6120	78	SI-68	116	SZ-15-A-3	27	SZ-5-7-14MM	28	TH-502	111	TX-3E10	60	UG-1210	92
SF-6124	78	SI-935-1/2	107	SZ-15-A-4	27	SZ-5-7-4MM	28	TM-20	111	TX-5110	75	UG-1210-D	92
SF-6128	78	SI-935-1/4	107	SZ-16	27	SZ-5-7-4MM	28	TM-24	111	TX-5112	75	UG-1211	92
SF-6320	78	SI-935-10MXM6	107	SZ-16-A	27	SZ-5-7-5MM	28	TN-20	111	TX-5114	75	UG-1212	92

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
UG-1212-D	92	UG-1610	92	UG-21MM55	97	UG-4MM11	92	UG-5MM11	92	UG-EX-255-3	99	UG-EX-377-B-12	99
UG-1213	92	UG-1610-D	92	UG-3016	93	UG-4MME1	92	UG-5MME1	92	UG-EX-255-4	99	UG-EX-377-B-12	100
UG-12MM03	94	UG-16MM03-D	95	UG-3016-D	93	UG-5.5MM11	92	UG-6324	98	UG-EX-255-6	99	UG-EX-377-B-3	99
UG-12MM03-D	94	UG-16MM11	92	UG-3020	93	UG-5.5MME1	92	UG-6326	98	UG-EX-255-8	99	UG-EX-377-B-3	100
UG-12MM11	92	UG-16MM15	97	UG-3020-D	93	UG-5110	96	UG-6326-D	98	UG-EX-255-B-2	99	UG-EX-377-B-6	99
UG-12MM13	94	UG-16MM15-D	97	UG-30MM37	98	UG-5110-D	96	UG-6MM11	92	UG-EX-255-B-4	99	UG-EX-377-B-6	100
UG-12MM13-D	94	UG-16MM43	95	UG-3108	93	UG-5114	96	UG-6MM11-D	92	UG-EX-255-B-6	99	UG-EX-377-M-4	99
UG-12MM23	94	UG-16MM43-D	95	UG-3108-D	93	UG-5114-D	96	UG-6MME1	92	UG-EX-257-2	99	UG-EX-377-M-4	100
UG-12MM23-D	94	UG-16MM45	97	UG-3109	93	UG-5118	96	UG-7MM11	92	UG-EX-257-4	99	UG-EX-501-2	99
UG-13MM03	94	UG-16MM45-D	97	UG-3110	93	UG-5119	96	UG-7MM11-D	92	UG-EX-257-5	99	UG-EX-501-3	99
UG-13MM03-D	94	UG-17MM13	95	UG-3110-D	93	UG-5120	96	UG-7MM13	94	UG-EX-257-6	99	UG-EX-501-4	99
UG-13MM11	92	UG-17MM13-D	95	UG-3111	93	UG-5120-D	96	UG-7MM21	92	UG-EX-370-10	98	UG-EX-501-6	99
UG-13MM11-D	92	UG-17MM15	97	UG-3112	93	UG-5121-D	96	UG-7MM23	94	UG-EX-370-2	98	UG-EX-503	99
UG-13MM13	94	UG-17MM15-D	97	UG-3116	93	UG-5122	96	UG-7MME1	92	UG-EX-370-3	98	UG-EX-503-B	99
UG-13MM13-D	94	UG-17MM23	95	UG-3117	93	UG-5122-D	96	UG-825	100	UG-EX-370-4	98	UG-EX-508-10	100
UG-13MM15	97	UG-17MM23-D	95	UG-3118	93	UG-5124	96	UG-834-TX-45-5	98	UG-EX-370-5	98	UG-EX-508-12	100
UG-13MM23	94	UG-17MM25	97	UG-3118-D	93	UG-5124-D	96	UG-834-TX-50	98	UG-EX-370-6	98	UG-EX-508-15	100
UG-13MM23-D	94	UG-17MM25-D	97	UG-3119	93	UG-5126	96	UG-834-TX-50R	98	UG-EX-370-8	98	UG-EX-508-16	100
UG-13MM25	97	UG-17MM45	97	UG-3210	93	UG-5126-D	96	UG-835	100	UG-EX-370-B-2	98	UG-EX-508-18	100
UG-13MM33	94	UG-17MM45-D	97	UG-3210-D	93	UG-5218	96	UG-838	100	UG-EX-370-B-3	98	UG-EX-508-20	100
UG-13MM35	97	UG-17MM55	97	UG-3211	93	UG-5219-D	96	UG-8MM11	92	UG-EX-370-B-4	98	UG-EX-508-36	100
UG-13MM43	94	UG-17MM55-D	97	UG-3211-D	93	UG-5222	96	UG-8MM11-D	92	UG-EX-371-2	99	UG-EX-508-8	100
UG-13MM43-D	94	UG-18MM13	95	UG-3212	93	UG-5224	96	UG-8MM13	94	UG-EX-371-3	99	UG-EX-508-9	100
UG-13MM45	97	UG-18MM13-D	95	UG-3212-D	93	UG-5224-D	96	UG-8MM13-D	94	UG-EX-371-4	99	UG-EX-508-B-10	100
UG-13MM55	97	UG-18MM15	97	UG-3214	93	UG-5225-D	96	UG-8MM15	97	UG-EX-371-6	99	UG-EX-508-B-12	100
UG-13MM55-D	97	UG-18MM15-D	97	UG-3216	93	UG-5226	96	UG-8MM15-D	97	UG-EX-374	99	UG-EX-508-B-8	100
UG-13MME1	92	UG-18MM23	95	UG-3216-D	93	UG-5226-D	96	UG-8MM21	92	UG-EX-374-B	99	UG-FL-10MM03	94
UG-13MME3	94	UG-18MM23-D	95	UG-3218	93	UG-5318	96	UG-8MM21-D	92	UG-EX-376-10	99	UG-FL-10MM21	92
UG-14MM13	94	UG-18MM25	97	UG-3218-D	93	UG-5318-D	96	UG-8MM23	94	UG-EX-376-12	99	UG-FL-10MM23	94
UG-14MM13-D	94	UG-18MM25-D	97	UG-3222	93	UG-5322	96	UG-8MME1	92	UG-EX-376-15	99	UG-FL-10MM23-E	94
UG-14MM15	97	UG-18MM35	97	UG-3222-D	93	UG-5322-D	96	UG-8MME3	94	UG-EX-376-18	99	UG-FL-10MM33	94
UG-14MM23	94	UG-18MM35-D	97	UG-32MM37	98	UG-5324	96	UG-9MM11	92	UG-EX-376-2	99	UG-FL-10MM43	94
UG-14MM23-D	94	UG-18MM45	97	UG-3318	93	UG-5324-D	96	UG-9MM11-D	92	UG-EX-376-24	99	UG-FL-10MM43-E	94
UG-14MM25	97	UG-18MM45-D	97	UG-3318-D	93	UG-5419-D	96	UG-9MM21	92	UG-EX-376-3	99	UG-FL-1108	92
UG-14MM33	94	UG-19MM13	95	UG-3412	93	UG-5420	96	UG-9MM21-D	92	UG-EX-376-36	99	UG-FL-1110	92
UG-14MM43	94	UG-19MM13-D	95	UG-3412-D	93	UG-5420-D	96	UG-9MM23	94	UG-EX-376-4	99	UG-FL-1112	92
UG-14MM65	97	UG-19MM15	97	UG-3416	93	UG-5422	96	UG-CSF-10MM23	94	UG-EX-376-5	99	UG-FL-1114	92
UG-15MM03	94	UG-19MM15-D	97	UG-3416-D	93	UG-5422-D	96	UG-CSF-10MM33	94	UG-EX-376-6	99	UG-FL-1116	92
UG-15MM03-D	94	UG-19MM25	97	UG-3418	93	UG-5426	96	UG-CSF-13MM23	94	UG-EX-376-8	99	UG-FL-11MM13	94
UG-15MM11	92	UG-19MM35	97	UG-3418-D	93	UG-5426-D	96	UG-CSF-13MM33	94	UG-EX-376-9	99	UG-FL-1210	92
UG-15MM13	94	UG-19MM35-D	97	UG-3420-D	93	UG-5522	96	UG-CSF-13MM43	94	UG-EX-376-B-10	99	UG-FL-1211	92
UG-15MM13-D	94	UG-19MM43	95	UG-3424	93	UG-5522-D	96	UG-CSF-13MM45	97	UG-EX-376-B-12	99	UG-FL-1212	92
UG-15MM15	97	UG-19MM43-D	95	UG-3424-D	93	UG-5526	96	UG-CSF-15MM23	95	UG-EX-376-B-2	99	UG-FL-1214	92
UG-15MM15-D	97	UG-1E08	92	UG-3426	93	UG-5526-D	96	UG-CSF-15MM33	95	UG-EX-376-B-3	99	UG-FL-12MM03	94
UG-15MM23	95	UG-1P09	92	UG-3516	93	UG-5608-D	96	UG-CSF-15MM43	95	UG-EX-376-B-4	99	UG-FL-12MM13	94
UG-15MM23-D	95	UG-1P11	92	UG-3516-D	93	UG-5616	96	UG-CSF-18MM36	98	UG-EX-376-B-5	99	UG-FL-13MM03	94
UG-15MM25	97	UG-1P12	92	UG-3524	93	UG-5616-D	96	UG-CSF-19MM25	97	UG-EX-376-B-6	99	UG-FL-13MM13	94
UG-15MM33	95	UG-1P16	92	UG-3524-D	93	UG-5618	96	UG-EX-250-10	98	UG-EX-376-B-8	99	UG-FL-13MM23	94
UG-15MM33-D	95	UG-20MM13	95	UG-3612	93	UG-5618-D	96	UG-EX-250-12	98	UG-EX-376-B-9	99	UG-FL-13MM25	97
UG-15MM35	97	UG-20MM15	97	UG-3612-D	93	UG-5620	96	UG-EX-250-18	98	UG-EX-377-12	99	UG-FL-13MM55	97
UG-15MM43	95	UG-20MM25	97	UG-3614	93	UG-5620-D	96	UG-EX-250-2	98	UG-EX-377-12	100	UG-FL-15MM03	94
UG-15MM43-D	95	UG-20MM25-D	97	UG-3614-D	93	UG-5622	96	UG-EX-250-3	98	UG-EX-377-2	99	UG-FL-15MM15	97
UG-15MM45	97	UG-21MM15	97	UG-3616	93	UG-5720	96	UG-EX-250-4	98	UG-EX-377-2	100	UG-FL-15MM45	97
UG-15MM45-D	97	UG-21MM15-D	97	UG-3616-D	93	UG-5814-D	96	UG-EX-250-6	98	UG-EX-377-4	99	UG-FL-16MM15	97
UG-15MM55	97	UG-21MM25	97	UG-3618	93	UG-5818-D	96	UG-EX-250-8	98	UG-EX-377-4	100	UG-FL-17MM15	97
UG-15MME5	97	UG-21MM25-D	97	UG-3618-D	93	UG-5916	96	UG-EX-255-10	99	UG-EX-377-6	99	UG-FL-18MM15	97
UG-1608	92	UG-21MM36	98	UG-3620	93	UG-5916-D	96	UG-EX-255-12	99	UG-EX-377-6	100	UG-FL-18MM25	97
UG-1608-D	92	UG-21MM45	97	UG-3P12	93	UG-5918	96	UG-EX-255-18	99	UG-EX-377-8	99	UG-FL-18MM35	97
UG-1609-D	92	UG-21MM45-D	97	UG-3P16	93	UG-5918-D	96	UG-EX-255-2	99	UG-EX-377-8	100	UG-FL-19MM13	95

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
UG-FL-19MM15	97	UG-M-12MM03-D	95	UG-M1P09	92	UG-MB-10MM23-D	95	UG-MBSF-15MM23	96	UG-SF-1114	92	UG-SF-21MM36	98
UG-FL-19MM25	97	UG-M-12MM11	93	UG-M1P11	92	UG-MB-10MM33	95	UG-MB-SF-15MM23	96	UG-SF-1116	92	UG-SF-21MM45	97
UG-FL-21MM36	98	UG-M-12MM13	95	UG-M1P12	92	UG-MB-11MM21	93	UG-MBVC-804-10MM	95	UG-SF-11MM11	92	UG-SF-21MM55	97
UG-FL-3016	93	UG-M-12MM13-D	95	UG-M1P16	92	UG-MB-11MM23	95	UG-MBVCCB-305-12MM	95	UG-SF-11MM13	94	UG-SF-3016	93
UG-FL-3116	93	UG-M-12MM23	95	UG-M-21MM15	98	UG-MB-1208	92	UG-MCBG-17MM15	97	UG-SF-11MM15	97	UG-SF-30MM37	98
UG-FL-3118	93	UG-M-13MM03	95	UG-M-21MM25	98	UG-MB-1209	92	UG-MFL-13MM43	95	UG-SF-11MM23	94	UG-SF-3116	93
UG-FL-3122	93	UG-M-13MM11	93	UG-M-3016	94	UG-MB-1210	92	UG-MR-7MME1	93	UG-SF-1212	92	UG-SF-3118	93
UG-FL-3216	93	UG-M-13MM13	95	UG-M-3116	94	UG-MB-1210-D	92	UG-MSF-10MM11	93	UG-SF-12MM03	94	UG-SF-3122	93
UG-FL-3218	93	UG-M-13MM13-D	95	UG-M-3118	94	UG-MB-1211	92	UG-MSF-10MM13	95	UG-SF-12MM11	92	UG-SF-3124	93
UG-FL-3412	93	UG-M-13MM15	97	UG-M-3124	94	UG-MB-1212	92	UG-MSF-10MM21	93	UG-SF-12MM13	94	UG-SF-3210	93
UG-FL-5120	96	UG-M-13MM23	95	UG-M-3216	94	UG-MB-1212-D	92	UG-MSF-10MM23	95	UG-SF-12MM23	94	UG-SF-3214	93
UG-FL-5122	96	UG-M-13MM25	97	UG-M-3218	94	UG-MB-1214	92	UG-MSF-10MM33	95	UG-SF-12MM53	94	UG-SF-3216	93
UG-FL-5124	96	UG-M-13MM35	97	UG-M-3318	94	UG-MB-12MM23	95	UG-MSF-10MM43	95	UG-SF-13MM03	94	UG-SF-3218	93
UG-FL-5126	96	UG-M-13MM43	95	UG-M-3412	94	UG-MB-12MM23-D	95	UG-MSF-13MM13	95	UG-SF-13MM11	92	UG-SF-32MM37	98
UG-FL-5222	96	UG-M-13MM43-D	95	UG-M-3416-D	94	UG-MB-13MM23	95	UG-MSF-13MM15	97	UG-SF-13MM13	94	UG-SF-3412	93
UG-FL-5224	96	UG-M-13MM45	97	UG-M-3416-E	94	UG-MB-13MM23-D	95	UG-MSF-13MM23	95	UG-SF-13MM15	97	UG-SF-3416	93
UG-FL-5324	96	UG-M-13MM55	97	UG-M-3418-D	94	UG-MB-13MM25	97	UG-MSF-13MM43	95	UG-SF-13MM23	94	UG-SF-3418	93
UG-FL-5516	96	UG-M-13MME1	93	UG-M-3424	94	UG-MB-13MM33	95	UG-MSF-14MM15	97	UG-SF-13MM25	97	UG-SF-3516	93
UG-FL-6324	98	UG-M-13MME3	95	UG-M-3426	94	UG-MB-13MM35	97	UG-MSF-15MM13	95	UG-SF-13MM33	94	UG-SF-5113	96
UG-FL-7MM13	94	UG-M-14MM13	95	UG-M-3614-D	94	UG-MB-13MM55	97	UG-MSF-15MM15	97	UG-SF-13MM35	97	UG-SF-5118	96
UG-FL-7MM23	94	UG-M-14MM13-D	95	UG-M3E16	94	UG-MB-14MM23	95	UG-MSF-15MM25	97	UG-SF-13MM43	94	UG-SF-5120	96
UG-FL-8MM11	92	UG-M-14MM15	97	UG-M-3P12	94	UG-MB-14MM23-D	95	UG-MSF-15MM35	97	UG-SF-13MM45	97	UG-SF-5122	96
UG-FL-8MM13	94	UG-M-14MM23	95	UG-M-3P16	94	UG-MB-14MM25	97	UG-MSF-17MM15	97	UG-SF-13MM53	94	UG-SF-5124	96
UG-FL-8MM21	92	UG-M-14MM43-D	95	UG-M-490	100	UG-MB-14MM25-D	97	UG-MSF-17MM45	97	UG-SF-13MM55	97	UG-SF-5126	96
UG-FL-8MM23	94	UG-M-15MM03	95	UG-M-490-14	100	UG-MB-14MM33	95	UG-MSF-18MM15	97	UG-SF-14MM13	94	UG-SF-5222	96
UG-HA-15608	99	UG-M-15MM11	93	UG-M-490-4	100	UG-MB-15MM23	96	UG-MSF-18MM45	98	UG-SF-14MM15	97	UG-SF-5224	96
UG-HA-15608-2X-14	99	UG-M-15MM13	95	UG-M-490-6	100	UG-MB-15MM25	97	UG-MSF-21MM15	98	UG-SF-14MM23	94	UG-SF-5324	96
UG-HA-15608-2X-2	99	UG-M-15MM13-D	95	UG-M-490-8	100	UG-MB-15MM33	96	UG-MSF-8MM13	95	UG-SF-15MM03	94	UG-SF-5420	96
UG-HA-15608-2X-4	99	UG-M-15MM15	97	UG-M-5.5MM11	93	UG-MB-15MM35	97	UG-MSWM-10MME1	93	UG-SF-15MM13	95	UG-SF-5422	96
UG-HA-15608-2X-6	99	UG-M-15MM23	96	UG-M-5.5MME1	93	UG-MB-17MM23	96	UG-MTX-3108	94	UG-SF-15MM15	97	UG-SF-5426	96
UG-HC-22712-15	99	UG-M-15MM25	97	UG-M-5110	96	UG-MB-17MM25	97	UG-MTX-3110	94	UG-SF-15MM25	97	UG-SF-5516	96
UG-HC-8612-4	99	UG-M-15MM33	96	UG-M-5120	96	UG-MB-17MM35	97	UG-MTX-3114	94	UG-SF-15MM33	95	UG-SF-5522	96
UG-HE-25316	100	UG-M-15MM35-D	97	UG-M-5122	96	UG-MB-17MM55	97	UG-MTX-5114	92	UG-SF-15MM35	97	UG-SF-6324	98
UG-HE-25316-2X-8	100	UG-M-15MM43	95	UG-M-5124	96	UG-MB-18MM23	96	UG-MVA-104-7MM	93	UG-SF-15MM43	95	UG-SF-6326	98
UG-M-10MM03	95	UG-M-15MM45	97	UG-M-5420	96	UG-MB-18MM25	97	UG-MVC-806-10MM	95	UG-SF-15MM45	97	UG-SF-7MM11	92
UG-M-10MM11	93	UG-M-15MM55	97	UG-M-5MM11	93	UG-MB-18MM35	98	UG-MX-1108	92	UG-SF-16MM03	95	UG-SF-7MM13	94
UG-M-10MM13	95	UG-M-15MME5	97	UG-M-5MME1	93	UG-MB-21MM25	98	UG-MX-1108-E	92	UG-SF-16MM15	97	UG-SF-7MM21	92
UG-M-10MM13-D	95	UG-M-16MM15	97	UG-M-6MM11	93	UG-MB-3210	94	UG-MX-1110	92	UG-SF-16MM45	97	UG-SF-7MM23	94
UG-M-10MM21	93	UG-M-16MM43	96	UG-M-6MME1	93	UG-MB-3211	94	UG-MX-1111	92	UG-SF-17MM13	95	UG-SF-8MM11	92
UG-M-10MM23	95	UG-M-16MM45	97	UG-M-7MM11	93	UG-MB-3216	94	UG-MX-1112	92	UG-SF-17MM15	97	UG-SF-8MM13	94
UG-M-10MM33	95	UG-M-17MM13	96	UG-M-7MM13	95	UG-MB-3218	94	UG-MX-1114	92	UG-SF-17MM23	95	UG-SF-8MM15	97
UG-M-10MM43	95	UG-M-17MM15	97	UG-M-7MM21	93	UG-MB-3318	94	UG-MZA-110	92	UG-SF-17MM25	97	UG-SF-8MM21	92
UG-M-10MME1	93	UG-M-17MM15-D	97	UG-M-7MME1	93	UG-MB-3516	94	UG-OS-10MM11	92	UG-SF-17MM45	97	UG-SF-8MM23	94
UG-M-10MME3	95	UG-M-17MM23	96	UG-M-7MME3	95	UG-MB-5224-D	96	UG-OS-10MM11-D	92	UG-SF-17MM55	97	UG-SF-9MM11	92
UG-M-1105	92	UG-M-17MM45	97	UG-M-825	100	UG-MB-5324	96	UG-OS-10MM23	94	UG-SF-18MM13	95	UG-SF-9MM23	94
UG-M-1107	92	UG-M-18MM13	96	UG-M-825-E8	100	UG-MB-7MM21	93	UG-OSM-10MM11	93	UG-SF-18MM15	97	UG-SF-9W-282	96
UG-M-1108-E	92	UG-M-18MM15	97	UG-M-8MM11	93	UG-MB-7MM23	95	UG-OSM-10MM23	95	UG-SF-18MM23	95	UG-SM-10MM13	95
UG-M-1110	92	UG-M-18MM23	96	UG-M-8MM11-D	93	UG-MB-8MM21	93	UG-OSMB-10MM21	93	UG-SF-18MM25	97	UG-SM-10MM21	93
UG-M-1111	92	UG-M-18MM25	97	UG-M-8MM13	95	UG-MB-8MM23	95	UG-OSMB-10MM23	95	UG-SF-18MM35	97	UG-SM-10MM23	95
UG-M-1112	92	UG-M-18MM35	97	UG-M-8MM15	97	UG-MB-9MM21	93	UG-OSMB-11MM23	95	UG-SF-18MM45	97	UG-SM-1108	92
UG-M-1114	92	UG-M-19MM13	96	UG-M-8MM21	93	UG-MB-9MM23	95	UG-SC-520	96	UG-SF-19MM13	95	UG-SM-1114	92
UG-M-1114-D	92	UG-M-19MM15	98	UG-M-8MM23	95	UG-MB-SF-10MM21	93	UG-SF-10MM03	94	UG-SF-19MM15	97	UG-SM-11MM21	93
UG-M-1116	92	UG-M1E07	92	UG-M-8MME1	93	UG-MB-SF-10MM23	95	UG-SF-10MM11	92	UG-SF-19MM25	97	UG-SM-10MM23	95
UG-M-11MM11	93	UG-M1E08	92	UG-M-8MME3	95	UG-MB-SF-11MM23	95	UG-SF-10MM13	94	UG-SF-19MM35	97	UG-SM-1210	92
UG-M-11MM13	95	UG-M1E08-LN	92	UG-M-9MM11	93	UG-MBSF-13MM25	97	UG-SF-10MM21	92	UG-SF-19MM36	98	UG-SM-1211	92
UG-M-11MM15	97	UG-M1E11	92	UG-M-9MM21	93	UG-MB-SF-13MM33	95	UG-SF-10MM23	94	UG-SF-19MM43	95	UG-SM-1212	92
UG-M-11MM21	93	UG-M1E12	92	UG-M-9MME1	93	UG-MBSF-13MM35	97	UG-SF-10MM33	94	UG-SF-21MM15	97	UG-SM-12MM23	95
UG-M-1210	92	UG-M1E16	92	UG-MB-10MM21	93	UG-MBSF-14MM23	95	UG-SF-10MM43	94	UG-SF-21MM15	97	UG-SM-13MM13	95
UG-M-12MM03	95	UG-M1P08-LN	92	UG-MB-10MM23	95	UG-MBSF-14MM25	97	UG-SF-1112	92	UG-SF-21MM25	97	UG-SM-13MM23	95

### PART NUMBER INDEX

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
UG-SM-13MM33	95	UG-EX-622	99	VE-368-13M10M	114	WJ-284-5/32	108
UG-SM-13MM43	95	UG-M-21MM36	98	VE-369-17MM-D-T55	114	WJ-284-7/64	108
UG-SM-15MM23	96	UG-M-835	100	VE-371-17MM-D-T55	114	WJ-284-9/64	108
UG-SM-15MM25	97	UG-M-855	100	VE-381-17MM-D-T55	114	X1108	46
UG-SM-15MM35	97	UG-M-858	100	VE-382-17MX14M	114	Y-321X	16
UG-SM-15MM43	95	VC-112-16MM-D	109	VE-6-14M-200M	113	YK-250	111
UG-SM-17MM23	96	VC-115-16MM	109	VE-84-22MX19M	114	YK-252	111
UG-SM-18MM25	97	VC-130-15M10M	113	VENC-117-18MXE14	114	YK-370	111
UG-SM-18MM35	98	VC-150-15MX13M	113	VENC-27-27MX24M	114	YK-372	111
UG-SM-3216	94	VC-159-15MX13M	113	VESF-106-17MX13M-D	114	YK-500	111
UG-SM-3218	94	VC-270-14MM	109	VESF-132-15MX10M	114	YK-501	111
UG-SM-7MM13	95	VC-271-14MM	109	VESF-332-15M13M	114	YK-502	111
UG-SM-7MM21	93	VC-27-14MM	113	VESF-54-8MM	113	ZA-110	108
UG-SM-8MM21	93	VC-274-12M-10M	113	VESF-78-22MM-19MM	114	ZA-310	108
UG-SM-8MM23	95	VC-282-14MX150	114	VFSFNC-135-19MM	110	ZA-314	108
UG-SM-9MM21	93	VC-287-14MX10M	113	VFSFNC-140-19MM-NY	110	ZA-510	108
UG-SM-SF-12MM23	95	VC-291-17MX13M	113	VG-116-18MM	81	ZA-512	108
UG-SW-282	96	VC-295-17MX12M	113	VG-64-21MM	113	ZA-514	108
UG-SW-282-D	96	VC-321-12MX10M	113	VG-66-21MX18M	114	ZE-112	108
UG-SW-343	93	VC-37-19M14M	113	VG-76-24MX14M	114	ZE-314	108
UG-SWM-13MM23	95	VC-487-10MM-D	56	VGNC-129-18MXE14	114	ZE-514	108
UG-SWM-15MM25	97	VC-612-10MX8M	113	VGSF-19-15MM	81	ZN-112	108
UG-SWM-15MM33	96	VC-613-10MX1740	114	VGSF-20-15MM	81	ZN-114	108
UG-SWMFL-13MM15	97	VC-679-13MMX8EP	113	VGSF-31-15MX10M	114	ZN-312	108
UG-SWMFL-13MM23	95	VC-681-13MMX5MM	113	VGSF-77-21MX12M	114	ZN-314	108
UG-SWMSF-10MM13	95	VC-76-8M-12M	113	VH-1-41MM	109	ZN-512	108
UG-SWMSF-10MM23	95	VCCB-280-14MM-D	109	VH-27-27MX22M	115	ZN-514	108
UG-SWMSF-10MM33	95	VCFL-107-16MM	109	VHSF-2-38MM-33MM	115		
UG-SWMSF-11MM23	95	VCFL-118-16MM	109	VPSFNC-1-19MM	110		
UG-SWMSF-12MM13	95	VCFL-119-16MM	109	VPSFNC-1-22MM	110		
UG-SWMSF-13MM13	95	VCFL-120-16MM	109	W-321X	16		
UG-SWMSF-13MM23	95	VCFLNC-121-16MM	109	WE-4516-4	115		
UG-SWMSF-14MM23	95	VCNC-843-10MX8M	113	WE-4516-6	115		
UG-SWMSF-14MM33	95	VCNC-844-10MXT30	114	WJ-1268	110		
UG-SWMSF-15MM13	95	VCSF-110-16MX24M	113	WJ-1268-10MM	110		
UG-SWMSF-15MM15	97	VCSF-131-11MXT30	114	WJ-1268-12MM	110		
UG-SWMSF-15MM23	96	VCSF-27-14MM-200M	113	WJ-1268-12MM-1-2	110		
UG-SWMSF-17MM13	96	VCSF-418-13MM	113	WJ-1268-14MM	110		
UG-SWMSF-17MM23	96	VCSF-419-13MM	113	WJ-1268-14MM-1/2	110		
UG-SWMSF-18MM13	96	VCSF-799-10M8M	113	WJ-1268-16MM-1-2	110		
UG-SWMSF-18MM23	96	VCSF-836-10MM	58	WJ-1268-19MM	110		
UG-SWMSF-19MM13	96	VCSF-840-10MM	58	WJ-1268-19MM-D	110		
UG-SWMSF-8MM23	95	VE-115-18MX13M	114	WJ-1268-8MM	110		
UG-TX-1110	92	VE-116-18MX15M	114	WJ-1680-A	109		
UG-TX-3108	93	VE-120-12MXTSQ10M	114	WJ-1680-B	109		
UG-TX-3110	93	VE-120-12MXTSQ12M	114	WJ-265-1/2	108		
UG-TX-3114	93	VE-120-18MX8M	114	WJ-265-1/4	108		
UG-TXA-908	92	VE-131-16MX8M	114	WJ-265-13/64	108		
UG-VC-68-13MM	94	VE-14-30MX18M	114	WJ-265-17/32	108		
UG-VFSF-132-19MM	98	VE-15-30MM	113	WJ-265-3/16	108		
UG-VGSF-41-19MM	98	VE-154-19MM-6MM	114	WJ-265-3/8	108		
UG-VGSF-43-22MM	98	VE-214-17MM-D	114	WJ-265-7/16	108		
UG-VGSF-60-21MM	98	VE-260-14MD-E10	114	WJ-284-1/4	108		
UG-X-1108	92	VE-27-14MM-150M	113	WJ-284-1/8	108		
UG-X-1110	92	VE-326-15MM-13MM	113	WJ-284-11	108		
UG-ZA-110	92	VE-331-13MM-T50	114	WJ-284-3/16	108		
UG-EX-250-5	98	VE-331-15M13M	114	WJ-284-3/8	108		
UG-7340	98	VE-333-14MX12M	114	WJ-284-30	108		
UG-855	100	VE-360-17MX14M	114	WJ-284-5/16	108		

#### TRADEMARK INFORMATION

THE FOLLOWING ARE REGISTERED TRADEMARKS OF ACUMENT INTELLECTUAL PROPERTIES, LLC.:  
TORX®, TORX PLUS®, TORXALIGN®

THE FOLLOWING ARE REGISTERED TRADEMARKS OF PHILLIPS SCREW COMPANY:  
MORTORQ®, PHILLIPS®, TORQ-SET®, TRI-WING®, POZIDRIV®, ACR®

SEL-O-FIT IS A TRADEMARK, AND APEX AND u-GUARD ARE REGISTERED TRADEMARKS OF APEX TOOL GROUP, LLC.

QUADREX IS A REGISTERED TRADEMARK OF QUADREX CONSULTING INC.

HI-TORQUE IS A TRADEMARK OF RUDY VAUGHN, LICENSOR



**BECAUSE THERE'S A LOT ON THE LINE.™**



**Kompania Narzędziowa "HERMES" Sp. z o.o.**  
ul. Sarni Stok 73 a, 43-300 Bielsko-Biała, Polska; tel: +48 33 821 41 90-91  
e-mail: [biuro@hermestools.eu](mailto:biuro@hermestools.eu) [www.hermestools.eu](http://www.hermestools.eu)

**APEX**®

ASSEMBLY & FABRICATION TOOLS

DAYTON, USA  SINCE 1933

**APEX ASSEMBLY & FABRICATION TOOLS**

762 W STEWART ST, DAYTON, OH 45417 | EMEA CONTACT: +49 7363 81-129 | [CONTACT@APEX-TOOLS.COM](mailto:CONTACT@APEX-TOOLS.COM) | [WWW.APEX-TOOLS.COM](http://WWW.APEX-TOOLS.COM)

**North America | South America**

APEX Tool Group  
670 Industrial Drive  
Lexington, SC 29072  
USA  
Phone: +1 (800) 845 5629  
Phone: +1 (919) 387 0099  
[APEX@APEX-Tools.com](mailto:APEX@APEX-Tools.com)  
[www.APEX-Tools.com](http://www.APEX-Tools.com)

APEX Tool Group  
Manufacturing México  
S. de R.L. de C.V.  
Vialidad El Pueblito #103  
Parque Industrial Querétaro  
Querétaro, QRO 76220  
México  
Tel: +52 (442) 211 3800  
Fax: +52 (800) 685 5560

APEX Tool Group  
Ind. Com. Ferram. Ltda.  
Av. Liberdade, 4055  
Zona Industrial Iporanga  
Sorocaba, São Paulo  
CEP# 13087-170  
Brazil  
Tel: +55 15 3238 3820  
Fax: +55 15 3238 3938

**Europe | Middle East | Africa**

APEX Tool Group GmbH  
Industriestraße 1  
73463 Westhausen  
Germany  
Phone: +49 (0) 73 63 810  
Fax: +49 (0) 73 63 81 222  
E-Mail: [Contact@APEX-Tools.com](mailto:Contact@APEX-Tools.com)  
Web: [www.APEX-Tools.de](http://www.APEX-Tools.de)

APEX Tool Group S.A.S.  
25 rue Maurice Chevalier  
77330 Ozoir-la-Ferrière Cedex,  
France  
Tel: +33 1 64 43 22 00  
Fax: +33 1 64 43 17 17  
E-Mail: [Contact@APEX-Tools.com](mailto:Contact@APEX-Tools.com)  
Web: [www.APEX-Tools.com](http://www.APEX-Tools.com)

APEX Tool Group  
Hungária Kft.  
Platánfa u.2 9027 Győr  
Hungary  
Tel: +36 96 66 1383  
Fax: +36 96 66 1135  
E-Mail: [Contact@APEX-Tools.com](mailto:Contact@APEX-Tools.com)  
Web: [www.APEX-Tools.com](http://www.APEX-Tools.com)

**Asia Pacific**

APEX Power Tool Trading  
(Shanghai) Co., Ltd.  
2nd Floor, Area C  
177 Bi Bo Road  
Pu Dong, New Area,  
Shanghai  
China 201203, P.R.C.  
Phone: +86 21 60880320  
Fax: +86 21 60880298

APEX Power Tools India  
Private Limited  
Gala No. 1, Plot No. 5  
S. No. 234, 235 & 245  
Indialand Global Industrial Park  
Taluka-Mulsi, Phase I  
Hinjawadi, Pune 411057  
Maharashtra, India  
Phone: +91 020 66761111