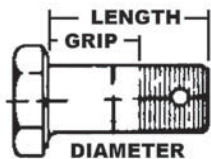


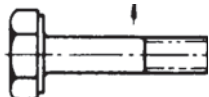
# AN BOLTS



Hex head aircraft bolts are made of high-strength type 4037 or 8740 alloy steel (type 8740 is most commonly used). The bolts are threaded after heat treatment. Minimum tensile strength 125,000 PSI. Cadmium plated per specification QQ-P-416, Type II, Class 3. Available with shank drilled for cotter pin or undrilled for stop nut application, and with or without drilled head for safety wire. Specify bolts to have undrilled shank by adding letter "A" after dash number. For bolts with drilled head add letter "H" after AN number. See illustrated examples. The length of AN aircraft bolts is measured from under the head to the end of the shank. The "grip" is the unthreaded portion of the shank. See table for conversion of length and/or grip to proper AN callout.

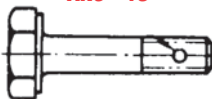
HA

**FOR UNDRILLED  
ADD THE LETTER "A"  
EXAMPLE:  
AN6 - 10A**



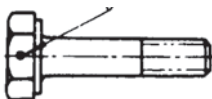
**UNDRILLED**

**FOR DRILLED SHANK NO  
LETTER  
EXAMPLE!  
AN6 - 10**



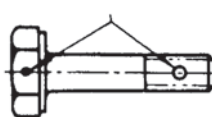
**SHANK ONLY  
DRILLED**

**FOR DRILLED HEAD  
ADD "H" AND "A"  
EXAMPLE:  
AN6H-10A**



**HEAD ONLY  
DRILLED**

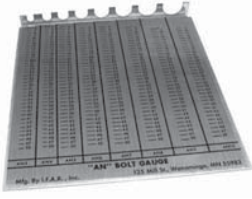
**FOR DRILLED HEAD AND  
SHANK  
ADD "H" ONLY  
EXAMPLE:  
AN6H-10**



**BOTH HEAD AND  
SHANK DRILLED**

Bolts are sold "EACH"		AN3				AN4					
ALL BOLTS			Cadmium Plated AN3 (10-32)		Stainless AN3C (10-32)			Cadmium Plated AN4 (1/4-28)		Stainless AN4C (1/4-28)	
Dash No.	Nominal Length	Grip Length	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price	Grip Price	Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price
-3	15/32	1/16	.	.	.	.	1/16	.	.	.	.
-4	17/32	1/8	.	.	.	.	1/16	.	.	.	.
-5	21/32	1/4	.	.	.	.	3/16	.	.	.	.
-6	25/32	3/8	.	.	.	.	5/16	.	.	.	.
-7	29/32	1/2	.	.	.	.	7/16	.	.	.	.
-10	1-1/32	5/8	.	.	.	.	9/16	.	.	.	.
-11	1-5/32	3/4	.	.	.	.	11/16	.	.	.	.
-12	1-9/32	7/8	.	.	.	.	13/16	.	.	.	.
-13	1-13/32	1	.	.	.	.	15/16	.	.	.	.
-14	1-17/32	1-1/8	.	.	.	.	1-1/16	.	.	.	.
-15	1-21/32	1-1/4	.	.	.	.	1-3/16	.	.	.	.
-16	1-25/32	1-3/8	.	.	.	.	1-5/16	.	.	.	.
-17	1-29/32	1-1/2	.	.	.	.	1-7/16	.	.	.	.
-20	2-1/32	1-5/8	.	.	.	.	1-9/16	.	.	.	.
-21	2-5/32	1-3/4	.	.	.	.	1-11/16	.	.	.	.
-22	2-9/32	1-7/8	.	.	.	.	1-13/16	.	.	.	.
-23	2-13/32	2	.	.	.	.	1-15/16	.	.	.	.
-24	2-17/32	2-1/8	.	.	.	.	2-1/16	.	.	.	.
-25	2-21/32	2-1/4	.	.	.	.	2-3/16	.	.	.	.
-26	2-25/32	2-3/8	.	.	.	.	2-5/16	.	.	.	.
-27	2-29/32	2-1/2	.	.	.	.	2-7/16	.	.	.	.
-30	3-1/32	2-5/8	.	.	.	.	2-9/16	.	.	.	.
-31	3-5/32	2-3/4	.	.	.	.	2-11/16	.	.	.	.
-32	3-9/32	2-7/8	.	.	.	.	2-13/16	.	.	.	.
-33	3-13/32	3	.	.	.	.	2-15/16	.	.	.	.
-34	3-17/32	3-1/8	.	.	.	.	3-1/16	.	.	.	.
-35	3-21/32	3-1/4	.	.	.	.	3-3/16	.	.	.	.
-36	3-25/32	3-3/8	.	.	.	.	3-5/16	.	.	.	.
-37	3-29/32	3-1/2	.	.	.	.	3-7/16	.	.	.	.
-40	4-1/32	3-5/8	.	.	.	.	3-9/16	.	.	.	.
-41	4-5/32	3-3/4	.	.	.	.	3-11/16	.	.	.	.
-42	4-9/32	3-7/8	.	.	.	.	3-13/16	.	.	.	.
-43	4-13/32	4	.	.	.	.	3-15/16	.	.	.	.
-44	4-17/32	4-1/8	.	.	.	.	4-1/16	.	.	.	.
-45	4-21/32	4-1/4	.	.	.	.	4-3/16	.	.	.	.
-46	4-25/32	4-3/8	.	.	.	.	4-5/16	.	.	.	.
-47	4-29/32	4-1/2	.	.	.	.	4-7/16	.	.	.	.
-50	5-1/32	4-5/8	.	.	.	.	4-9/16	.	.	.	.
-51	5-5/32	4-3/4	.	.	.	.	4-11/16	.	.	.	.
-52	5-9/32	4-7/8	.	.	.	.	4-13/16	.	.	.	.
-53	5-13/32	5	.	.	.	.	4-15/16	.	.	.	.
-54	5-17/32	5-1/8	.	.	.	.	5-1/16	.	.	.	.
-55	5-21/32	5-1/4	.	.	.	.	5-3/16	.	.	.	.
-56	5-25/32	5-3/8	.	.	.	.	5-5/16	.	.	.	.
-57	5-29/32	5-1/2	.	.	.	.	5-7/16	.	.	.	.
-60	6-1/32	5-5/8	.	.	.	.	5-9/16	.	.	.	.

# AN BOLTS



## AN BOLT GAUGE

Automatically sizes all AN bolts up to 5/8" diameter and 5 inches long.

P/N 04-05400.....

## POCKET BOLT GAUGE

This new aluminum gauge measures just 3-3/4" x 5-7/8" to fit easily in a shirt pocket. Determines exact part numbers for AN 3 thru AN 8 diameter bolts thru 5" in length. P/N 04-05300.....



## SAMPLE PART NUMBERS

AN3-4 ..... Cad-plated, drilled shank  
 AN3-4A ..... Cad-plated, undrilled  
 AN3C-4 ..... Stainless steel, drilled shank  
 AN3C-4A ..... Stainless steel, undrilled

## AN BOLT KIT

CONTAINS: • AN6-16A (8 qty) • AN6-12A (2 qty) • AN4-15A (20 qty) • AN8-13A (8 qty) • AN6-10A (12 qty) • AN8-33A (24 qty) • AN7-33A (4 qty) • AN9-17 (4 qty)

P/N 04-01727

## APR AN BOLT GAUGE

AN bolt gauge deluxe heavy duty model measures diameter and length of AN bolts up to 8", 388 precision conversions. Fraction / decimal / millimeter equivalents, with 8" Inch and 20 cm metric rulers. 4 colors. Pocket size. PVC plastic 8-5/8" x 2-1/2" x .030"

P/N 11-07726.....



HA

Bolts are sold "EACH"		AN5					AN6				
ALL BOLTS		Grip Length	Cadmium Plated AN5 (5/16-24)		Stainless AN5C (5/16-24)		Grip Length	Cadmium Plated AN6 (3/8-24)		Stainless AN6C (3/8-24)	
Dash No.	Nominal Length		Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price		Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price
-4	19/32	1/16	.	.	.	.	1/16	-	.	-	-
-5	23/32	3/16	.	.	.	.	1/16	.	.	.	.
-6	27/32	5/16	.	.	.	.	3/16	.	.	.	.
-7	31/32	7/16	.	.	.	.	5/16	.	.	.	.
-10	1-3/32	9/16	.	.	-	.	7/16	.	.	-	.
-11	1-7/32	11/16	.	.	-	.	9/16	.	.	.	.
-12	1-11/32	13/16	.	.	.	.	11/16	.	.	.	.
-13	1-15/32	15/16	.	.	-	.	13/16	.	.	.	.
-14	1-19/32	1-1/16	.	.	-	.	15/16	.	.	.	.
-15	1-23/32	1-3/16	.	.	-	.	1-1/16	.	.	.	.
-16	1-27/32	1-5/16	.	.	-	-	1-3/16	.	.	.	.
-17	1-31/32	1-7/16	.	.	-	-	1-5/16	.	.	-	.
-20	2-3/32	1-9/16	.	.	-	.	1-7/16	.	.	.	-
-21	2-7/32	1-11/16	.	.	-	-	1-9/16	.	.	-	-
-22	2-11/32	1-13/16	.	.	-	.	1-11/16	.	.	-	-
-23	2-15/32	1-15/16	.	.	-	.	1-13/16	.	.	-	-
-24	2-19/32	2-1/16	.	.	-	-	1-15/16	.	.	-	-
-25	2-23/32	2-4/16	.	.	-	.	2-1/16	.	.	-	-
-26	2-27/32	2-5/16	.	.	-	-	2-3/16	.	.	-	-
-27	2-31/32	2-7/16	.	.	-	.	2-5/16	.	.	-	-
-30	3-3/32	2-9/16	.	.	-	-	2-7/16	.	.	-	-
-31	3-7/32	2-11/16	.	.	-	-	2-9/16	.	.	-	-
-32	3-11/32	2-13/16	.	.	-	-	2-11/16	.	.	-	-
-33	3-15/32	2-15/16	.	.	-	-	2-13/16	.	.	-	-
-34	3-19/32	3-1/16	.	.	-	-	2-15/16	.	.	-	-
-35	3-23/32	3-3/16	.	.	-	-	3-1/16	.	.	-	-
-36	3-27/32	3-5/16	.	.	-	-	3-3/16	.	.	-	-
-37	3-31/32	3-7/16	.	.	-	-	3-5/16	.	.	-	-
-40	4-3/32	3-9/16	.	.	-	-	3-7/16	.	.	-	-
-41	4-7/32	3-11/16	.	.	-	-	3-9/16	.	.	-	-
-42	4-11/32	3-13/16	-	.	-	-	3-11/16	.	.	-	-
-43	4-15/32	3-15/16	.	.	-	-	3-13/16	.	.	-	-
-44	4-19/32	4-1/16	-	.	-	-	3-15/16	.	.	-	-
-45	4-23/32	4-3/16	.	.	-	-	4-1/16	.	.	-	-
-46	4-27/32	4-5/16	.	.	-	-	4-3/16	.	.	-	-
-47	4-31/32	4-7/16	.	.	-	-	4-5/16	.	.	-	-
-50	5-3/32	4-9/16	.	.	-	-	4-7/16	.	.	-	-
-51	5-7/32	4-11/16	.	.	-	-	4-9/16	.	.	-	-
-52	5-11/32	4-13/16	.	.	-	-	4-11/16	.	.	-	-
-53	5-15/32	4-15/16	.	.	-	-	4-13/16	.	.	-	-
-54	5-19/32	5-1/16	.	.	-	-	4-15/16	.	.	-	-
-55	5-23/32	5-3/16	.	.	-	-	5-1/16	.	.	-	-
-56	5-27/32	5-5/16	.	.	-	-	5-3/16	.	.	-	-
-57	5-31/32	5-7/16	.	.	-	-	5-5/16	.	.	-	-
-60	6-3/32	5-9/16	.	.	-	-	5-7/16	.	.	-	-

# AN BOLTS

## USE REFERENCE CHART

Bolt Size	AN960 Flat Washer	AN970 Lg. Area Flat Washer	AN365 Nylon Insert Locknut	AN310 Castle Nut	AN380 Cotter Pin
AN3	.....-10	.....-3	.....-1032	.....-3	.....-2 or longer
AN4	.....-416	.....-4	.....-428	.....-4	.....-25-2 or longer
AN5	.....-516	.....-5	.....-524	.....-5	.....-25-3
AN6	.....-616	.....-6	.....-624	.....-6	.....-3-3 or longer
AN7	.....-716	.....-7	.....-720	.....-7	.....-3-3 or longer
AN8	.....-816	.....-8	.....-820	.....-8	.....-3-4 or longer

## SAMPLE PART NUMBERS

AN3-4	.....	Cad-plated, drilled shank
AN3-4A	.....	Cad-plated, undrilled
AN3C-4	.....	Stainless steel, drilled shank
AN3C-4A	.....	Stainless steel, undrilled

## TOBACCO BAGS



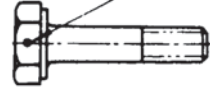
Cloth bags for holding hardware as it is removed from the aircraft. Set of 25.

P/N 04-05310 .....

**NOTICE - Aircraft Spruce & Specialty Company is committed to supplying only top quality aircraft grade hardware. In most cases we receive our hardware certified to applicable AN, MS, or NAS specifications from our suppliers, but on certain items, it is necessary for us to accept hardware without certifiable traceability in order to continue supplying that particular part number.**

Bolts are sold "EACH"		AN7						AN8		
ALL BOLTS		Grip Length	Cadmium Plated AN7 (7/16-20)		Stainless AN7C (7/16-20)		Grip Length	Cadmium Plated AN8 (1/2-20)		
Dash	Nominal No.		Drilled Price	Undrilled "A" Price	Drilled Price	Undrilled "A" Price		Drilled Price	Undrilled "A" Price	
-5	23/32	1/16	.	.	-	-	-	-	-	
-6	27/32	3/16	--	.	-	-	1/16	-	.	
-7	31/32	5/16	--	.	-	-	3/16	.	.	
-10	1-3/32	7/16	.	.	-	-	5/16	--	.	
-11	1-7/32	9/16	--	.	-	-	7/16	.	.	
-12	1/11/32	11/16	.	.	-	-	9/16	.	.	
-13	1-15/32	13/16	.	.	-	-	11/16	.	.	
-14	1-19/32	15/16	.	.	-	-	13/16	.	.	
-15	1-23/32	1-1/16	.	.	-	-	15/16	.	.	
-16	1-27/32	1-3/16	.	.	-	-	1-1/16	.	.	
-17	1-31/32	1-5/16	.	.	-	-	1-3/16	.	.	
-20	2-3/32	1-7/16	.	.	-	-	1-5/16	.	.	
-21	2-7/32	1-9/16	.	.	-	-	1-7/16	.	.	
-22	2-11/32	1-11/16	.	.	-	-	1-9/16	.	.	
-23	2-15/32	1-13/16	.	.	-	-	1-11/16	.	.	
-24	2-19/32	1-15/16	.	.	-	-	1-13/16	.	.	
-25	2-23/32	2-1/16	.	.	-	-	1-15/16	.	.	
-26	2-27/32	2-3/16	.	.	-	-	2-1/16	.	.	
-27	2-31/32	2-5/16	.	.	-	-	2-3/16	.	.	
-30	3-3/32	2-7/16	--	.	-	-	2-5/16	.	.	
-31	3-7/32	2-9/16	.	.	-	-	2-7/16	.	.	
-32	3-11/32	2-11/16	.	.	-	-	2-9/16	.	.	
-33	3-15/32	2-13/16	.	.	-	-	2-11/16	.	.	
-34	3-19/32	2-15/16	.	.	-	-	2-13/16	.	.	
-35	3-23/32	3-1/16	.	.	-	-	2-15/16	--	.	
-36	3-27/32	3-3/16	.	.	-	-	3-1/16	.	.	
-37	3-31/32	3-5/16	.	.	-	-	3-3/16	.	.	
-40	4-3/32	3-7/16	.	.	-	-	3-5/16	--	.	
-41	4-7/32	3-9/16	--	--	-	-	3-7/16	.	.	
-42	4-11/32	3-11/16	.	.	-	-	3-9/16	.	--	
-43	4-15/32	3-13/16	.	.	-	-	3-11/16	.	.	
-44	4-19/32	3-15/16	.	.	-	-	3-13/16	.	.	
-45	4-23/32	4-1/16	.	.	-	-	3-15/16	.	.	
-46	4-27/32	4-3/16	.	.	-	-	4-1/16	--	--	
-47	4-31/32	4-5/16	.	.	-	-	4-3/16	.	--	
-50	5-3/32	4-7/16	.	.	-	-	4-5/16	.	.	
-51	5-7/32	4-9/16	--	--	-	-	4-7/16	--	.	
-52	5-11/32	4-11/16	.	.	-	-	4-9/16	.	.	
-53	5-15/32	4-13/16	--	-	-	-	4-11/16	.	--	
-54	5-19/32	4-15/16	-	--	-	-	4-13/16	--	.	
-55	5-23/32	5-1/16	.	.	-	-	4-15/16	.	--	
-56	5-27/32	5-3/16	--	.	-	-	5-1/16	.	.	
-57	5-31/32	5-5/16	--	.	-	-	5-3/16	.	--	
-60	6-3/32	5-7/16	.	.	-	-	5-5/16	.	--	

## DRILLED HEAD, UNDRILLED SHANK



HA

### AN3 Ea.

H4A	.....
H5A	.....
H6A	.....
H10A	.....
H12A	.....
H13A	.....
H15A	.....

### AN4 Ea.

H3A	.....
H4A	.....
H5A	.....
H6A	.....
H7A	.....
H12A	.....
H13A	.....
H14A	.....
H16A	.....
H21A	.....
H26A	.....
H30A	.....
H32A	.....

### AN5 Ea.

H6A	.....
H12A	.....
H13A	.....
H16A	.....
H17A	.....
H20A	.....
H31A	.....
H33A	.....

### AN6 Ea.

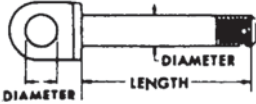
H11A	.....
H16A	.....
H20A	.....
H31A	.....
H32A	.....
H34A	.....
H37A	.....
H40A	.....
H41A	.....
H43A	.....
H45A	.....
H46A	.....
H50A	.....

### AN8 Ea.

H7A	.....
-----	-------

# EYE BOLTS

## AN42 - AN46 EYE BOLTS



Eye bolts are special purpose bolts to be used where external tension loads are to be applied. The eye is designed for attachment of such devices as a turnbuckle fork, a clevis or a cable shackle. Manufactured and plated in same manner as AN3 - AN8 bolts. Minimum tensile strength 125, 000 PSI. Eye bolts will be furnished with either drilled or undrilled shank subject to stock on hand. Add letter "A" after dash number for undrilled shank.

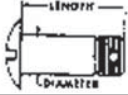
HA

NOMINAL LENGTH	AN42B					AN43B				
	SHANK 3/16"		HOLE 3/16"		THREAD 10-32	SHANK 1/4"		HOLE 3/16"		THREAD 1/4-28
	GRIP LENGTH	DRILLED PART NO.	PRICE EACH	UNDRILLED PART NO.	PRICE EACH	GRIP LENGTH	DRILLED PART NO.	PRICE EACH	UNDRILLED PART NO.	PRICE EACH
1/2	1/8	AN42B-4	.	AN42B-4A	.	1/16	AN43B-4	.	AN43B-4A	.
5/8	1/4	AN42B-5	.	AN42B-5A	.	3/16	AN43B-5	.	AN43B-5A	.
3/4	3/8	AN42B-6	.	AN42B-6A	.	5/16	AN43B-6	.	AN43B-6A	.
7/8	1/2	AN42B-7	.	AN42B-7A	.	7/16	AN43B-7	.	AN43B-7A	.
1	5/8	AN42B-10	.	AN42B-10A	.		AN43B-10	.	AN43B-10A	.
1-1/8	3/4	AN42B-11	.	AN42B-11A	.	11/16	AN43B-11	.	AN43B-11A	.
1-1/4	7/8	AN42B-12	.	AN42B-12A	.	13/16	AN43B-12	.	AN43B-12A	.
1-3/8	1	AN42B-13	.	AN42B-13A	.	15/16	AN43B-13	.	AN43B-13A	.
1-1/2	1-1/8	AN42B-14	.	AN42B-14A	.	1-1/16	AN43B-14	.	AN43B-14A	.
1-5/8	1-1/4	AN42B-15	.	AN42B-15A	.	1-3/16	AN43B-15	.	AN43B-15A	.
1-3/4	1-3/8	AN42B-16	.	AN42B-16A	.	1-5/16	AN43B-16	.	AN43B-16A	.
1-7/8	1-1/2	AN42B-17	.	AN42B-17A	.	1-7/16	AN43B-17	.	AN43B-17A	.
2	1-5/8	AN42B-20	.	AN42B-20A	.	1-9/16	AN43B-20	.	AN43B-20A	.
2-1/8	1-3/4	AN42B-21	.	AN42B-21A	.	1-11/16	AN43B-21	.	AN43B-21A	.
2-1/4	1-7/8	AN42B-22	.	AN42B-22A	.	1-13/16	AN43B-22	.	AN43B-22A	.
2-3/8	2	AN42B-23	.	AN42B-23A	.	1-15/16	AN43B-23	.	AN43B-23A	.
2-1/2	2-1/8	AN42B-24	.	AN42B-24A	.	2-1/16	AN43B-24	.	-	-
2-5/8	2-1/4	AN42B-25	.	AN42B-25A	.	2-3/16	AN43B-25	.	AN43B-25A	.
2-3/4	3-3/8	-	-	AN42B-26A	.	2-5/16	AN43B-26	.	AN43B-26A	.
2-7/8	2-1/2	AN42B-27	.	AN42B-27A	.	2-7/16	AN43B-27	.	-	-
3	2-5/8	AN42B-30	.	AN42B-30A	.	2-9/16	AN43B-30	.	-	-

Nominal Length	AN44			AN44A (Undrilled)			AN45			AN45A (Undrilled)		
	Shank 5/16"	Hole 1/4"	Thread 5/16-24	Shank 5/16"	Hole 1/4"	Thread 5/16-24	Shank 5/16"	Hole 5/16"	Thread 5/16-24	Shank 5/16"	Hole 5/16"	Thread 5/16-24
	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each	Grip Length	Drilled P/N	Price Each
7/8	3/16	AN44-5	.	3/16	AN44-5A	.	-	-	-	-	-	-
1	7/16	AN44-7	.	7/16	AN44-7A	.	7/16	AN45-7	.	-	-	-
1-1/8	9/16	AN44-10	.	9/16	AN44-10A	.	9/16	AN45-10	.	9/16	AN45-10A	.
1-1/4	11/16	AN44-11	.	11/16	AN44-11A	.	11/16	AN45-11	.	-	-	-
1-1/4	13/16	AN44-12	.	13/16	AN44-12A	.	13/16	AN45-12	.	13/16	AN45-12A	.
1-3/8	15/16	AN44-13	.	15/16	AN44-13A	.	-	AN45-13	.	-	-	-
1-1/2	1-1/16	AN44-14	.	1-1/16	AN44-14A	.	-	AN45-14	.	-	AN45-14A	.
1-5/8	1-3/16	AN44-15	.	1-3/16	AN44-15A	.	-	AN45-15	.	-	-	-
1-3/4	1-5/16	AN44-16	.	1-5/16	AN44-16A	.	1-5/16	AN45-16	.	-	-	-
1-7/8	1-7/16	AN44-17	.	1-7/16	AN44-17A	.	-	AN45-17	.	-	AN45-17A	.
2	1-9/16	AN44-20	.	1-9/16	AN44-20A	.	1-9/16	AN45-20	.	1-9/16	AN45-20A	.
2-1/8	-	AN44-21	.	-	AN44-21A	.	-	-	.	-	-	-
2-1/4	-	-	.	-	AN44-22A	.	-	-	.	-	-	-
2-3/8	-	-	.	-	-	.	-	AN45-23	.	-	-	-
2-1/2	-	-	.	-	AN44-23A	.	-	-	.	-	-	-
2-5/8	-	AN44-24	.	-	AN44-24A	.	2-1/16	AN45-24	.	2-1/16	AN45-24A	.
2-3/4	-	-	.	-	AN44-25A	.	-	-	.	-	AN45-25A	.
2-7/8	-	AN44-26	.	-	AN44-26A	.	2-5/16	AN45-26	.	-	-	-
3	-	-	.	-	AN44-27A	.	-	AN45-27	.	-	AN45-27A	.

Nominal Length	AN46			AN46A (Undrilled)		
	Shank 3/8"	Hole 3/8"	Thread 3/8-24	Shank 3/8"	Hole 3/8"	Thread 3/8-24
	Grip Length	Drilled Part No.	Price Each	Grip Length	Drilled Part No.	Price Each
7/8	5/16	AN46-7	.	-	-	-
1	-	-	.	-	-	-
1-1/8	-	-	.	-	-	-
1-1/4	-	-	.	-	-	-
1-3/8	-	-	.	-	-	-
1-1/2	-	AN46-14	.	-	AN46-14A	.
1-5/8	-	AN46-15	.	-	AN46-15A	.
1-3/4	-	AN46-16	.	-	-	-
1-7/8	1-5/16	AN46-17	.	1-5/16	AN46-17A	.
2	1-7/16	AN46-20	.	1-7/16	AN46-20A	.
2-1/8	1-9/16	AN46-21	.	-	-	-
2-1/4	-	-	.	-	AN46-22A	.
2-3/8	-	-	.	-	AN46-23A	.
2-1/2	-	-	.	-	-	-
2-5/8	2-1/16	AN46-25	.	2-1/16	AN46-25A	.
2-3/4	2-3/16	AN46-26	.	2-3/16	AN46-26A	.
2-7/8	2-1/16	AN46-27	.	-	-	-
3	2-3/16	AN46-30	.	-	-	-

# CLEVIS BOLTS – PROP BOLTS



## AN23 - AN27 CLEVIS BOLTS

Clevis bolts have a slotted brazier type head. They are special-purpose bolts for use where a large shearing stress occurs (never in tension). Manufactured and cadmium plated in same manner as AN3 - AN8 aircraft bolts. Minimum tensile strength 125,000 PSI. Available with drilled or undrilled shank. Add letter "A" after dash number for undrilled shank. Prices fluctuate on clevis bolts.

Dash No.	AN23				AN24				AN25				AN26				AN27				
	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	Grip	Length	Drilled	Un-Drilled	
8	3/16	17/32			3/16	17/32															
9	1/4	19/32			1/4	19/32			1/4	39/64			1/4	39/64							
10	5/16	21/32			5/16	21/32			5/16	43/64			5/16	43/64							
11	3/8	23/32			3/8	23/32			3/8	47/64			3/8	47/64							
12	7/16	25/32			7/16	25/32			7/16	51/64			7/16	51/64			3/8	51/64			
13	1/2	27/32			1/2	27/32			1/2	55/64			1/2	55/64			7/16	55/64			
14	9/16	29/32			9/16	29/32			9/16	59/64			9/16	59/64			1/2	59/64			
15	5/8	31/32			5/8	31/32			5/8	63/64			5/8	63/64			9/16	63/64			
16	11/16	1-1/32			11/16	1-1/32			11/16	1-3/64			11/16	1-3/64			5/8	1-3/64			
17	3/4	1-3/32			3/4	1-3/32			3/4	1-7/64			3/4	1-7/64			11/16	1-7/64			
18	13/16	1-5/32			13/16	1-5/32			13/16	1-11/64			13/16	1-11/64			3/4	1-11/64			
19	7/8	1-7/32			7/8	1-7/32			7/8	1-15/64			7/8	1-15/64			13/16	1-15/64			
20	15/16	1-9/32			15/16	1-9/32			15/16	1-19/64			15/16	1-19/64			7/8	1-19/64			
21	1	1-11/32			1	1-11/32			1	1-23/64			1	1-23/64			15/16	1-23/64			
22	1-1/16	1-13/32			1-1/16	1-13/32			1-1/16	1-27/64			1-1/16	1-27/64			1	1-27/64			
23	1-1/8	1-15/32			1-1/8	1-15/32			1-1/8	1-31/64			1-1/8	1-31/64			1-1/8	1-31/64			
24	1-3/16	1-17/32			1-3/16	1-17/32			1-3/16	1-35/64			1-3/16	1-35/64			1-1/8	1-35/64			
25	1-1/4	1-19/32			1-1/4	1-19/32			1-1/4	1-39/64			1-1/4	1-39/64			1-3/16	1-39/64			
26	1-5/16	1-21/32			1-5/16	1-21/32			1-5/16	1-43/64			1-5/16	1-43/64			1-1/4	1-43/64			
27	1-3/8	1-23/32			1-3/8	1-23/32			1-3/8	1-47/64			1-3/8	1-47/64			1-5/16	1-47/64			
28	1-7/16	1-25/32			1-7/16	1-25/32			1-7/16	1-51/64			1-7/16	1-51/64			1-3/8	1-51/64			
29	1-1/2	1-27/32			1-1/2	1-27/32			1-1/2	1-55/64			1-1/2	1-55/64			1-7/16	1-55/64			
30	1-9/16	1-29/32			1-9/16	1-29/32			1-9/16	1-59/64			1-9/16	1-59/64			1-1/2	1-59/64			
31	1-5/8	1-31/32			1-5/8	1-31/32			1-5/8	1-63/64			1-5/8	1-63/64			1-9/16	1-63/64			
32	1-11/16	2-1/32			1-11/16	2-1/32			1-11/16	2-3/64			1-11/16	2-3/64			1-5/8	2-3/64			
34	1-13/16	2-5/32			1-13/16	2-5/32			1-13/16	2-11/64			1-13/16	2-11/64			1-3/4	2-11/64			
36	1-15/16	2-9/32			1-15/16	2-9/32			1-15/16	2-19/64			1-15/16	2-19/64			1-7/8	2-19/64			
38	2-1/16	2-13/32			2-1/16	2-13/32			2-1/16	2-27/64			2-1/16	2-27/64			2	2-27/64			
40	2-3/16	2-17/32			2-3/16	2-17/32			2-3/16	2-35/64			2-3/16	2-35/64			2-1/8	2-35/64			

HA

## AN173, AN174, & AN175 CLOSE TOLERANCE BOLTS

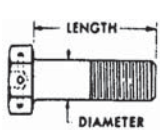


Non-corrosion-resistant cadmium-plated steel machine bolts. The appearance of these bolts can be of two types: on the more common type, the head and threads are cad but the grip appears silver due to being ground and greased. The second type is all cad and is manufactured to Revision 20 (April, 1990) of the military specification. Both are acceptable. Both are drilled.

Cat. #	Dia. (inches)	Threads/inch	Length (inches)	Grip (inches)	Price		
AN173-5	.1900	32 NF-3A	.656	.250	----		
AN173-6			.781	.375	----		
AN173-7			.906	.500	----		
AN173-10			1.031	.625	----		
AN173-11			1.156	.750	----		
AN173-12			1.281	.875	----		
AN173-13			1.406	1.000	----		
AN173-14			1.531	1.125	----		
AN173-15			1.656	1.250	----		
AN173-16			1.781	1.375	----		
AN174-3			.2500	28 UNF-3A	.469	.062	----
AN174-4					.531	.062	----
AN174-5					.656	.188	----
AN174-6					.781	.312	----
AN174-7	.906	.438			----		
AN174-10	1.031	.562			----		
AN174-11	1.156	.688			----		
AN174-12	1.281	.812			----		
AN174-13	1.406	.938			----		
AN174-14	1.531	1.062			----		
AN174-15	1.656	1.188			----		

Cat. #	Dia. (inches)	Threads/inch	Length (inches)	Grip (inches)	Price		
AN174-16	.2500	28 UNF-3A	1.781	1.312	----		
AN174-17			1.906	1.438	----		
AN174-20			2.031	1.562	----		
AN174-21			2.156	1.688	----		
AN174-23			2.406	1.938	----		
AN174-24			2.531	2.062	----		
AN175-14			.3125	24 UNF-3A	1.594	1.062	----
AN175-15					1.719	1.188	----
AN175-16					1.844	1.312	----
AN175-17					1.969	1.438	----
AN175-20					2.094	1.562	----
AN175-21					2.219	1.688	----
AN175-22					2.344	1.812	----
AN175-23					2.469	1.938	----
AN175-24	2.594	2.062			----		
AN175-25	2.719	2.188			----		
AN175-26	2.844	2.312			----		
AN175-27	2.969	2.438			----		
AN175-30	3.094	2.562			----		
AN175-31	3.219	2.688			----		
AN175-32	3.344	2.812	----				
AN175-33	3.469	2.938	----				

## AN76 PROP BOLTS



Similar to AN3-AN8 aircraft bolts except hex head drilled three ways for safety wire. Tensile strength 125,000 PSI. Undrilled shank only. Stocked in 3/8" diameter. Prices fluctuate according to availability of each part number.

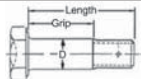
Dash No.	Price ea.
-5 to -15	.
-16 to -25	---
-26 to -35	.

Dash No.	Grip ±1/64	Length +1/32 -1/64	Dash No.	Grip ±1/64	Length +1/32 -1/64	Dash No.	Grip ±1/64	Length +1/32 -1/64	Dash No.	Grip ±1/64	Length +1/32 -1/64
2	-	16	1-1/8	1-51/64	32	2-5/8	3-19/64	46	4-1/8	4-51/64	
3	-	17	1-1/4	1-59/64	33	2-3/4	3-27/64	47	4-1/4	4-59/64	
4	-	20	1-3/8	2-3/64	34	2-7/8	3-35/64	50	4-3/8	5-3/64	
5	1/16	47/64	21	1-1/2	2-11/64	35	3	3-41/64	51	4-1/2	5-11/64
6	1/8	51/64	22	1-5/8	2-19/64	36	3-1/8	3-51/64	52	4-5/8	5-19/64
7	1/4	59/64	23	1-3/4	2-27/64	37	3-1/4	3-59/64	53	1-3/4	5-27/64
10	3/8	1-3/64	24	1-7/8	2-35/64	40	3-3/8	4-3/64	54	4-7/8	5-35/64
11	1/2	1-11/64	25	2	2-43/64	41	3-1/2	4-11/64	55	5	5-43/64
12	5/8	1-19/64	26	2-1/8	2-51/64	42	3-5/8	4-19/64	56	5-1/8	5-51/64
13	3/4	1-27/64	27	2-1/4	2-59/64	43	3-3/4	4-27/64	57	5-1/4	5-59/64
14	7/8	1-35/64	30	2-3/8	3-3/64	44	3-7/8	4-35/64	60	5-3/8	6-3/64
15	1	1-43/64	31	2-1/2	3-11/64	45	4	4-43/64	-	-	-

## SUBSTITUTIONS FOR AN 76 PROP BOLTS

**Note:** AN76 series prop bolts are becoming increasingly difficult to locate due to very limited current production. If we are unable to furnish AN76 prop bolts (or whichever diameter is ordered), in same dimensions as ordered. Example: If AN76-45 prop bolt is unavailable, AN6H-45A will be substituted. Please specify at time of order if this substitution is not acceptable.

## NAS6203-NAS6206 SHEAR BOLTS



These bolts supercede NAS1103-NAS1106 high strength bolts.

Part No.	Alt/Obsolete	Our PN	THD/Dia.	Length (in.)	Grip (in.)	Price
NAS6203-2	NAS1103-2	04-00988	10-32	7/16	1/8	.
NAS6203-3	NAS1103-3	04-00989	10-32	1/2	3/16	.
NAS6203-4	NAS1103-4	04-00991	10-32	9/16	1/4	.
NAS6203-5	NAS1103-5	04-00992	10-32	5/8	5/16	.
NAS6203-6	NAS1103-6	04-00993	10-32	11/16	3/8	.
NAS6203-7	NAS1103-7	04-00994	10-32	3/4	7/16	.
NAS6203-8	NAS1103-8	04-00996	10-32	13/16	1/2	.
NAS6203-9	NAS1103-9	04-00997	10-32	7/8	9/16	.
NAS6203-10	NAS1103-10	04-00998	10-32	15/16	5/8	.
NAS6203-11	NAS1103-11	04-00999	10-32	1	11/16	.
NAS6203-12	NAS1103-12	04-01007	10-32	1-1/16	3/4	.
NAS6203-13	NAS1103-13	04-01012	10-32	1-1/8	13/16	.
NAS6203-14	NAS1103-14	04-01013	10-32	1-3/16	7/8	.
NAS6203-15	NAS1103-15	04-01014	10-32	1-1/4	15/16	.
NAS6203-16	NAS1103-16	04-01016	10-32	1-5/16	1	.
NAS6204-3	NAS1104-3	04-01017	1/4-28	9/16	3/16	.
NAS6204-4	NAS1104-4	04-01018	1/4-28	5/8	1/4	.
NAS6204-5	NAS1104-5	04-01019	1/4-28	11/16	5/16	.
NAS6204-7	NAS1104-7	04-01022	1/4-28	13/16	7/16	.
NAS6204-8	NAS1104-8	04-01023	1/4-28	7/8	1/2	.
NAS6204-9	NAS1104-9	---	1/4-28	15/16	9/16	.
NAS6204-10	NAS1104-10	04-01025	1/4-28	1	5/8	.
NAS6204-11	NAS1104-11	04-01026	1/4-28	1-1/16	11/16	.
NAS6204-12	NAS1104-12	04-01027	1/4-28	1-1/8	3/4	.
NAS6204-13	NAS1104-13	04-01028	1/4-28	1-3/16	13/16	.
NAS6204-14	NAS1104-14	04-01029	1/4-28	1-1/4	7/8	.
NAS6204-15	NAS1104-15	04-01030	1/4-28	1-5/16	15/16	.
NAS6204-16	NAS1104-16	04-01031	1/4-28	1-3/8	1	.

# HARDWARE KITS

## BEGINNER'S BOLT KITS

### UNDRILLED KIT 102 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-3A	4	-5A	6	-4A	6
-4A	6	-6A	6	-6A	6
-5A	6	-7A	6	-10A	6
-6A	6	-10A	6	-11A	6
-7A	6	-11A	6	-13A	4
-10A	6	-15A	4	-14A	6

P/N 04-00090 .....

### DRILLED KIT 102 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-4	6	-6	6	-6	6
-5	6	-7	6	-10	6
-6	6	-10	6	-14	6
-7	6	-12	6	-15	4
-10	6	-13	6	-16	6
-11	4	-14	4	-17	6

P/N 04-00100 .....

## HOMEBUILDER'S KIT

### CADMIUM PLATED 629 PIECES AN BOLTS CONTAINS 4 EACH

DRILLED		UNDRILLED	
AN3-4		AN3-4A	
AN3-5		AN3-5A	
AN3-6	AN4-6	AN3-6A	AN4-6A
AN3-7	AN4-7	AN3-7A	AN4-7A
AN3-10	AN4-10	AN3-10A	AN4-10A
AN3-11	AN4-11	AN3-11A	AN4-11A
AN3-12	AN4-12	AN3-12A	AN4-12A
AN3-13	AN4-13	AN3-13A	AN4-13A
AN3-14	AN4-14	AN3-14A	AN4-14A
AN3-15	AN4-15	AN3-15A	AN4-15A
AN3-16	AN4-16	AN3-16A	AN4-16A
AN3-17	AN4-17	AN3-17A	AN4-17A
AN3-20	AN4-20	AN3-20A	AN4-20A

Also Included:

NYLON INSERT LOCKNUTS	
ITEM #	QTY.
AN365-1032	52
AN365-428	44

CASTLE NUTS	
ITEM #	QTY.
AN310-3	52
AN310-4	44

FLAT WASHERS	
ITEM #	QTY.
AN960-10	30
AN960-10L	30
AN960-416	30
AN960-416L	30

COTTER PINS	
ITEM #	QTY.
AN380-2-2	125

P/N 04-00230 .....

## ADVANCED MECHANIC'S KIT

### 1,229 PIECES - CADMIUM PLATED

DRILLED	UNDRILLED	AN3	AN4	AN5	AN6
-4	-4A	3	3	3	3
-5	-5A	3	3	3	3
-6	-6A	3	3	3	3
-7	-7A	3	3	3	3
-10	-10A	3	3	3	3
-11	-11A	3	3	3	3
-12	-12A	3	3	3	3
-13	-13A	3	3	3	3
-15	-15A	3	3	3	3

Also Includes:

FLAT WASHERS		NYLON INSERT LOCKNUTS	
ITEM #	QTY.	ITEM#	QTY.
AN960-10	100	AN365-1032	27
AN960-416	100	AN365-428	27
AN960-516	100	AN365-524	27
AN960-616	100	AN365-624	27

COTTER PINS		CASTLE NUTS	
ITEM #	QTY.	ITEM#	QTY.
AN380-2-3	100	AN310-3	27
AN380-25-3	200	AN310-4	27
AN380-3-3	100	AN310-5	27
		AN310-6	27

AN6-4 NOT INCLUDED

P/N 04-00240 .....

## DELUXE BOLT PACK

### UNDRILLED KIT BOLTS 500 PIECES

AN3	QTY	AN4	QTY	AN5	QTY
-3A	10	-5A	10	-6A	10
-4A	10	-6A	10	-10A	10
-5A	10	-7A	10	-12A	10
-6A	10	-10A	10	-16A	10
-7A	10	-11A	10		
-10A	10	-12A	10		
-11A	10	-13A	10		
-12A	10	-14A	10		
-13A	10	-15A	10		
-14A	10	-16A	10		
-15A	10	-17A	10		
-16A	10	-22A	10		
-17A	10	-24A	10		
-20A	10	-26A	10		

### DRILLED KIT BOLTS

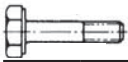
AN3	QTY	AN4	QTY	AN5	QTY
-5	10	-6	10	-7	10
-6	10	-7	10	-14	10
-7	10	-10	10	-17	10
-10	10	-12	10	-24	10
-12	10	-16	10		
-15	10	-20	10		
-20	10				
-24	10				

P/N 04-00245 .....

HA

# HARDWARE KITS

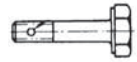
## ECONOMY AN BOLT ASSORTMENTS



### BOLT ASSORTMENT - UNDRILLED

Qty	P/N	Qty	P/N	Qty	P/N
10	AN3-3A	4	AN4-4A	4	AN5-5A
10	AN3-4A	4	AN4-5A	4	AN5-6A
10	AN3-5A	4	AN4-6A	4	AN5-7A
10	AN3-6A	4	AN4-7A	4	AN5-10A
10	AN3-7A	4	AN4-10A	4	AN5-11A
10	AN3-10A	4	AN4-11A	4	AN5-12A
4	AN3-11A	4	AN4-12A	4	AN5-13A
4	AN3-12A	4	AN4-13A	4	AN5-14A
4	AN3-13A	4	AN4-14A	4	AN5-15A
4	AN3-14A	4	AN4-15A	4	AN5-16A
4	AN3-15A	4	AN4-16A	4	AN5-17A
4	AN3-16A	4	AN4-17A	4	AN5-20A
4	AN3-17A	4	AN4-20A	4	AN5-24A
4	AN3-20A	4	AN4-24A		
4	AN3-24A				

204-piece Undrilled Assortment ..... P/N 04-00105.....  
 Above with 44-Drawer Cabinet ..... P/N 04-00110.....




### BOLT ASSORTMENT - DRILLED

Qty	P/N	Qty	P/N	Qty	P/N
10	AN3-3	4	AN4-4	4	AN5-5
10	AN3-4	4	AN4-5	4	AN5-6
10	AN3-5	4	AN4-6	4	AN5-7
10	AN3-6	4	AN4-7	4	AN5-10
10	AN3-7	4	AN4-10	4	AN5-11
10	AN3-10	4	AN4-11	4	AN5-12
4	AN3-11	4	AN4-12	4	AN5-13
4	AN3-12	4	AN4-13	4	AN5-14
4	AN3-13	4	AN4-14	4	AN5-15
4	AN3-14	4	AN4-15	4	AN5-16
4	AN3-15	4	AN4-16	4	AN5-17
4	AN3-16	4	AN4-17	4	AN5-20
4	AN3-17	4	AN4-20	4	AN5-24
4	AN3-20	4	AN4-24	4	
1	AN3-24	4		4	

204-piece Drilled Assortment ..... P/N 04-00115.....  
 Above with 44-Drawer Cabinet ..... P/N 04-00120.....

HA



**ECONOMY COMBINED AN BOLT ASSORTMENT**

Both drilled and undrilled assortments shown above  
 P/N 04-00125.....


Both assortments shown above with 16-Drawer & 64-Drawer storage cabinets  
 P/N 04-00130.....



**ECONOMY WASHER & COTTER PIN ASSORTMENTS**  
 To Accompany AN Bolt Assortments Shown Above



Washers For Undrilled Assortment P/N 04-00135.....	Washers & Cotter Pins For Drilled Bolt Assortment P/N 04-00140.....	Washers & Cotter Pins For Combined Assortment P/N 04-00145.....
-------------------------------------------------------	------------------------------------------------------------------------	--------------------------------------------------------------------




**WASHER ASSORTMENTS**  
 1,500 PIECES - STAINLESS

Contains 100 each of the following:

- 6, 8 & 10 AN960C & AN960CL
- 6, 8 & 10 Nylon
- 6, 8 & 10 MS35333
- 6, 8 & 10 MS35338

P/N 04-00220.....



**WASHER ASSORTMENTS**  
 1,500 PIECES - CAD-PLATED

Contains 100 each of the following:

- 6, 8 & 10 AN960 & AN960L
- 6, 8 & 10 Nylon Washer
- 6, 8 & 10 MS35333
- 6, 8 & 10 MS35338

P/N 04-00215.....

# HARDWARE KITS

## ECONOMY SCREW PACKS



### 1/2" 100° 600-Piece Screw Pack

#### Flat Phillips - AN507C Machine Screws

100	6-32 x 1/2
100	8-32 x 1/2
100	10-32 x 1/2

#### Flat Phillips Sheet Metal Screws

100	6 x 1/2B
100	8 x 1/2B
100	10 x 1/2B

Steel plated..... P/N 04-00180.....  
Stainless..... P/N 04-00185.....

### 1/2" 600-Piece Screw Pack

#### Truss Phillips - AN526C Machine Screws

100	6-32 x 1/2
100	8-32 x 1/2
100	10-32 x 1/2

#### Truss Phillips Sheet Metal Screws

100	6 x 1/2A
100	8 x 1/2A
100	10 x 1/2A

Steel plated..... P/N 04-00190.....  
Stainless..... P/N 04-00195.....

### 1/2" 900-Piece Screw Pack

The entire contents of 600-piece pack shown above plus the following:

#### AN507C 100° CSK Flat Phillips Machine Screws

100	6-32 x 1/2
100	8-32 x 1/2
100	10-32 x 1/2

Steel plated..... P/N 04-00205.....  
Stainless..... P/N 04-00210.....

HA

## SCREW KITS LARGE ASSORTMENT 2,250 PIECES



#### AN526 Machine Screw, Truss Phillips

100	4-40 x 1/2
100	6-32 x 1/2
100	8-40 x 3/8
100	8-32 x 1/2
100	10-32 x 1/2
100	10-32 x 3/4



#### Sheet Metal Screw, Truss Phillips

100	4 x 1/2
100	6 x 1/2
100	8 x 1/2
100	8 x 1/2B
100	10 x 1/2

#### AN507 100° CSK Machine Screw, FP

100	6-32 x 1/2
100	8-32 x 1/2
100	10-32 x 1/2

#### Nylon Insert Locknuts

50	6-32
50	8-32
50	10-32

#### Flat Washer AN960

100	6
100	8
100	10

#### Nylon Washers

100	6
100	8
100	10

#### 100° CSK Washers

50	8
50	10

Stainless Kit..... P/N 04-00295.....

Steel Plated Kit..... P/N 04-00296.....



## STRAIGHT BUSHINGS

Oilite Impregnated Bronze. SAE 841.

Model No.	Part No.	Hole I.D.	Hole O.D.	Length	Price Ea.
AA304-20	05-01856	1/4	3/8	1	.
AA309-5	05-01857	3/16	5/16	3/4	.
B812-6	05-02098	1/2	3/4	3/4	.
B812-7	05-02099	1/2	3/4	7/8	.
B610-6	04-01944	3/8	5/8	3/4	.
8363	05-04543	5/8	1	1-1/8	.



PN 04-01646

## BRASS FLANGED BUSHINGS

Model No.	Part No.	Hole I.D.	Hole O.D.	Length	Flange O.D.	Flange Thickness	Price Each
FB46-02	04-01646	1/4	3/8	1/4	1/2	3/64	.
FB810-04	04-01647	1/2	5/8	1/2	7/8	1/8	.
FB810-08	04-01648	1/2	5/8	1	7/8	1/8	.
FB812-08	04-01649	1/2	3/4	1	1	1/8	.
FB1012-04	04-01639	5/8	3/4	1/2	1	1/8	.
FB1012-08	04-01640	5/8	3/4	1	1	1/8	.
FB-1013-08	04-01641	.6270	.8150	1	1-1/16	5/32	.
FB1214-06	04-01642	3/4	7/8	3/4	1-1/8	5/32	.
FB-1620-06	04-01644	1	1-1/4	3/4	1-1/2	3/16	.
FB1620-10	04-01645	1	1-1/4	1-1/4	1-1/2	3/16	.
FF303-01	04-01650	3/16	5/16	3/16	7/16	1/16	.
FF312-02	04-01651	.252	.3775	1/2	15/32	1/16	.
FF435-1	04-01652	1/4	7/16	1/2	1/2	1/16	.
FF512-03	04-01653	.3765	.5030	5/8	5/8	3/32	.
FF520-10	05-02114	3/8	1/2	3/8	5/8	1/16	.
FF520-15	FF520-15	3/8	1/2	1/4	5/8	1/16	.
FF620-01	04-01654	.5020	.6270	1/2	7/8	1/16	.
FF730-03	04-01655	5/8	3/4	5/8	1	3/32	.

## ECONOMY SCREW KIT STAINLESS STEEL - 2,100 PIECES



#### AN526C Machine Truss Phillips

Sizes 6-32, 8-32, 10-32

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"



#### AN507C Machine 100° CSK, Flat Phillips

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"



#### Sheet Metal Truss Phillips

Sizes 6, 8, 10

Qty.	Length
100	1/2"
50	5/8"
25	3/4"
25	1"



#### Sheet Metal 100° CSK, Flat Phillips

Qty.	Length
100	1/2"

Stainless Kit..... P/N 04-00290.....



# HARDWARE KITS

## NUT-COTTER PIN ASSORTMENTS

### CAD-PLATED COTTER PIN KIT 350 PCS



100.....	1/16 x 1/2"	50.....	1/8 x 1"
100.....	5/64 x 1/2"	25.....	5/32 x 2"
50.....	3/32 x 1/2"	25.....	3/16 x 2"
P/N 04-00155.....			

### STAINLESS STEEL COTTER PIN KIT 400 PCS



100.....	1/16 x 1/2"	50.....	1/8 x 1"
100.....	5/64 x 1/2"	25.....	5/32 x 2"
100.....	3/32 x 1/2"	25.....	3/16 x 2"
P/N 04-00150.....			

### CAD-PLATED COTTER PIN KIT 500 PCS



100.....	1/16 x 1/2"	50.....	1/16 x 1-1/2"
100.....	5/64 x 3/4"	50.....	5A/32 x 2"
100.....	3/32 x 1"	25.....	A3/16 x 2"
50.....	1/8 x 3/4"	25.....	3/16 x 2-1/2"
P/N 04-00165.....			

### STAINLESS STEEL COTTER PIN KIT 500 PCS



100.....	1/16 x 1/2"	50.....	1/16 x 1-1/2"
100.....	5/64 x 3/4"	50.....	5/32 x 2"
100.....	3/32 x 1"	25.....	3/16 x 2"
50.....	1/8 x 3/4"	25.....	3/16 x 2-1/2"
P/N 04-00160.....			

### DELUXE COTTER PIN KITS 850 PCS

#### AN380 - Cad-Plated

Dash	Size	Qty.	Dash	Size	Qty.
-1-2	1/32 x 1/2"	50	-3-4	3/32 x 1"	75
-1-4	1/32 x 1"	50	-3-6	3/32 x 1-1/2"	25
-2-2	1/16 x 1/2"	100	-3-8	3/32 x 2"	25
-2-3	1/16 x 3/4"	100	-4-3	1/8 x 3/4"	25
-2-4	1/16 x 1"	100	-4-5	1/8 x 1-1/4"	75
-25-2	5/64 x 1/2"	25	-4-8	1/8 x 2"	50
-25-3	5/64 x 3/4"	25	-4-10	1/8 x 2-1/2"	50
-3-3	3/32 x 3/4"	75			

P/N 04-00375.....

#### AN381 - Stainless

Dash	Size	Qty.	Dash	Size	Qty.
-1-8	1/16 x 1/2"	100	-3-16	3/32 x 1"	75
-2-12	1/16 x 3/4"	100	-3-24	3/32 x 1-1/2"	25
-2-16	1/16 x 1"	100	-4-12	1/8 x 3/4"	25
-2-24	1/16 x 1-1/2"	50	-4-16	1/8 x 1"	50
-25-8	5/64 x 3/4"	50	-4-24	1/8 x 1-1/2"	25
-25-12	5/64 x 1/2"	75	-4-32	1/8 x 2"	25
-3-8	3/32 x 1/2"	75	-4-40	1/8 x 2-1/2"	25
-3-12	3/32 x 3/4"	50			

P/N 04-00380.....

### ECONOMY AN365 NUT PACKS



#### AN365C NUT KIT Stainless

Qty.	Part No.
25.....	4-40
50.....	6-32
50.....	8-32
50.....	10-32
25.....	1/4-28

#### AN365 NUT KIT Cad-Plated

Qty.	Part No.
50.....	4-40
100.....	6-32
100.....	8-32
100.....	10-32
50.....	1/4-28

Stainless Kit ..... P/N 04-00170.....  
Cad Plated Kit ..... P/N 04-00175.....

### LOCKNUT KIT 208 PIECES

*Cad-Plated. For undrilled bolt assortment.*



100 ea.....	AN365-1032
56 ea.....	AN365-428
52 ea.....	AN365-524

P/N 04-00330.....

### CASTLE NUT KIT 208 PIECES

*Cad-Plated.  
For drilled bolt assortment*



100 ea.....	AN310-3
56 ea.....	AN310-4
52 ea.....	AN310-5

P/N 04-00335.....

### AN365C NUT KIT STAINLESS 200 PIECES



50 ea.....	632	25 ea.....	428
50 ea.....	832	25 ea.....	524
50 ea.....	1032		

P/N 04-00340.....

### AN365 NUT KIT CAD-PLATED - 400 PIECES



100 ea.....	632	50 ea.....	428
100 ea.....	832	50 ea.....	524
100 ea.....	1032		

P/N 04-00345.....

### 470 PIECE COMBO NUT ASSORTMENT

#### Nylon Insert Locknuts

Item #	Qty.
AN365-632	15
AN365-832	50
AN365-1032	50
AN365-428	50
AN365-524	15

#### Plain Hex Nuts

Item #	Qty.
AN315-3	25
AN315-4	25
AN315-5	15
AN315-6	15

#### Castle Nuts

Item #	Qty.
AN310-3	50
AN310-4	50
AN310-5	15
AN310-6	15

#### Shear Castle Nuts

Item #	Qty.
AN320-3	25
AN320-4	25
AN320-5	15
AN320-6	15

P/N 04-00350.....

HA

# HARDWARE KITS



## DELUXE BOLT PACK

700 BOLTS - 50 Sizes, individually packaged. AN3, AN4 and AN5 bolts in lengths from 3/8" to 2-3/4" with drilled and undrilled shanks, in quantities selected to accommodate popular usage. Furnished with a 44-drawer storage cabinet. An exceptionally fine value. P/N 04-00200.....



Part No.	Qty.	Length	1/4" Dia., Undrilled Shank	
<b>3/16" Dia., Undrilled Shank</b>				
AN3-3A	10	3/8"	AN4-10A 24 1"	
AN3-4A	15	1/2"	AN4-11A 12 1-1/8"	
AN3-5A	25	5/8"	AN4-12A 12 1-1/4"	
AN3-6A	25	3/4"	AN4-13A 12 1-3/8"	
AN3-7A	12	7/8"	AN4-14A 12 1-1/2"	
AN3-10A	30	1"	AN4-15A 12 1-5/8"	
AN3-11A	30	1-1/8"	AN4-16A 12 1-3/4"	
AN3-12A	30	1-1/4"	AN4-17A 12 1-7/8"	
AN3-13A	20	1-3/8"	AN4-22A 6 2-1/4"	
AN3-14A	20	1-1/2"	AN4-24A 6 2-1/2"	
AN3-15A	20	1-5/8"	AN4-26A 6 2-3/4"	
AN3-16A	20	1-4/3"	<b>1/4" Dia., Drilled Shank</b>	
AN3-17A	20	1-7/8"	AN4-6 10 3/4"	AN4-7 10 7/8"
AN3-20A	12	2"	AN4-10 10 1"	AN4-12 10 1-1/4"
<b>3/16" Dia., Drilled Shank</b>				
AN3-5	15	5/8"	AN4-16 6 1-3/4"	AN4-20 6 2"
AN3-6	20	3/4"	<b>5/16" Dia. Undrilled Shank</b>	
AN3-7	20	7/8"	AN5-6A 6 3/4"	AN5-10A 8 1"
AN3-10	20	1"	AN5-12A 6 1-1/8"	AN5-16A 6 1-3/4"
AN3-12	10	1-1/4"	<b>5/16" Dia. Drilled Shank</b>	
AN3-15	10	1-5/8"	AN5-7 6 7/8"	AN5-14 6 1-1/2"
AN3-20	8	2"	AN5-17 6 1-7/8"	AN5-24 6 2-1/2"
AN3-24	8	2-1/2"	<b>1/4" Dia., Undrilled Shank</b>	
AN4-5A	24	5/8"	AN5-7 6 7/8"	AN5-14 6 1-1/2"
AN4-6A	24	3/4"	AN5-17 6 1-7/8"	AN5-24 6 2-1/2"
AN4-7A	24	7/8"	<b>1/4" Dia., Undrilled Shank</b>	

## DELUXE WASHER & COTTER PIN PACK

2000 WASHERS, 700 COTTER PINS - 31 Items, individually packaged. A combination of flat washers in steel and anodized aluminum, regular and light weight, large-area washers, internal locking type, Tinnerman countersunk washers and six useful sizes of cotter pins. 26 Drawer hardware cabinet included. P/N 04-00300.....

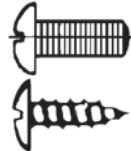
Part No.	Qty.	Size	Steel, Large Flat		
<b>Steel, Regular Flat</b>					
AN960-6	100	#6	AN970-4 14 1/4"		
AN960-8	100	#8	AN970-5 11 5/16"		
AN960-10	250	3/16"	<b>Steel, Internal Lock</b>		
AN960-416	200	1/4"	MS35333-37 50 #6	MS35333-38 50 #8	
AN960-516	100	5/16"	MS35333-39 50 #10	MS35333-40 50 1/4"	
<b>Steel, Light Flat</b>					
AN960-6L	100	#6	MS35333-41 50 5/16"	<b>Tinnerman Countersunk</b>	
AN960-8L	100	#8	A3236-012-24A 100 #6	A3135-017-24A 100 #8	
AN960-10L	100	3/16"	A3235-028-24A 100 #10	<b>Cotter Pins</b>	
AN960-416L	100	1/4"	Part No.	Qty.	Size
AN960-516L	50	5/16"	MS24665-132	225	1/16" x 1/2" L
<b>Anod. Alum. Regular Flat</b>					
AN960PD10	50	3/16"	MS24665-134	200	1/16" x 3/4" L
AN960PD416	50	1/4"	MS24665-136	200	1/16" x 1"
<b>Anod. Alum. Light Flat</b>					
AN960PD10L	50	3/16"	MS24665-283	50	3/32" x 3/4" L
AN960PD416L	50	1/4"	MS24665-285	13	3/32" x 1" L
<b>Steel, Large Flat</b>					
AN970-3	25	3/16"	MS24665-360	12	1/8" x 2" L

## ASSORTED HARDWARE KITS HOMEBUILDERS HARDWARE KIT

Contains: • 78 AN3 (10-32 size) Undrilled bolts in 13 consecutive sizes from AN3-4A through AN3-20A • 66 AN4 (1/4" dia.) Undrilled Bolts in 11 consecutive sizes from AN4-6A through AN4-20A • 100 AN365-1032 Stop Nuts • 100 AN365-428 Stop Nuts • 100 AN960-10 Washers • 100 AN960-416 Washers • 100 AN380-2-2 Cotter Pins P/N 04-00400.....  
With 26-Drawer Storage Cabinet..... P/N 04-00500.....

## MECHANICS HARDWARE KIT

Contains: • 40 AN3 (10-32 size) Bolts from 1/2" to 3" long • 44 AN4 (1/4" dia.) Bolts from 1" to 4" long • 52 AN5 (5/16" dia.) Bolts from 1" to 4" long • 24 AN6 (3/8" dia.) Bolts from 1-3/4" to 4-1/2" long • 300 AN960 Washers • 75 AN365 Stop Nuts • 100 AN380 Cotter Pins  
Bolts are furnished in equal quantities with drilled and undrilled shanks. Lengths are spaced in 1/4" increments. The proper number, size and type of nuts, washers and cotter pins are furnished to mate with bolts. P/N 04-00600.....  
With (1) 26 & (1) 64 -Drawer Storage Cabinets P/N 04-00700.....



## DELUXE SCREW PACK

3500 SCREWS - 55 Items, individually packaged. A good working assortment of standard screws including truss head, 100° flat head and structural type, washer head, 100° flat head sheet metal screws for use with Tinnerman countersunk washers, truss head sheet metal screws, both sharp and blunt point, & brass instrument screws. 44-Drawer cabinet included. P/N 04-00800.....

PART NO.	QTY.	SIZE	AN509 Structural Screws			
<b>AN 526 Truss Hd Screw, Phillips</b>						
AN526-632R6	100	6-32 x 3/8"	MS24694S5 25 8-32 x 1/2"			
AN526-632R8	100	x 1/2"	MS24694S7 25 x 5/8"			
AN526-632R10	100	x 5/8"	MS24694S9 25 x 3/4"			
AN526-632R12	100	x 3/4"	MS24694S50 25 10-32 x 1/2"			
AN526-832R6	100	8-32 x 3/8"	MS24694S52 25 x 5/8"			
AN526-832R8	100	x 1/2"	MS24694S54 25 x 3/4"			
AN526-832R10	100	x 5/8"	<b>Washer Head Structural Screws</b>			
AN526-832R12	100	x 3/4"	AN525-832R8 25 8-32 x 1/2"	AN525-832R10 25 x 5/8"		
AN526-1032R8	100	10-32 x 1/2"	AN525-1032R8 25 10-32 x 1/2"	AN525-1032R10 25 x 5/8"		
AN526-1032R12	100	x 3/4"	AN525-1032R12 25 x 3/4"	<b>Sheet Metal Screws</b>		
AN526-1032R16	50	x 1"	<b>100°C snk Flat Head Phillips</b>			
<b>AN507 Screws</b>						
<b>100° C snk Flat Head Phillips</b>						
MS24693S26	100	6-32 x 3/8"	NAS548P-6 100 #6 x 3/8"	NAS548P6-8 100 x 1/2"		
MS24693S28	100	x 1/2"	NAS548P6-10 100 x 5/8"	NAS548P8-8 100 #8 x 1/2"		
MS24693S29	100	x 5/8"	NAS548P8-10 100 x 5/8"	<b>Sheet Metal Screws, Truss Hd "B"</b>		
MS24693S10	100	x 3/4"	MS24693S31 100 x 7/8"	#4R x 1/4" 100 Phillips		
MS24693S31	100	x 7/8"	MS24693S48 100 8-32 x 3/8"	#4R x 3/8" 100 Blunt Point		
MS24693S50	100	x 1/2"	MS24693S51 100 x 5/8"	#4R x 1/2" 100		
MS24693S51	100	x 5/8"	MS24693S52 100 x 3/4"	#6R x 3/8" 100		
MS24693S52	100	x 3/4"	MS24693S54 50 x 1"	#6R x 1/2" 100		
MS24693S54	50	x 1"	MS24693S58 25 x 1-1/2"	#8R x 5/8 100		
MS24693S58	25	x 1-1/2"	MS24693S272 100 x 1/2"	#8R x 1/2" 100		
MS24693S272	100	x 1/2"	MS24693S273 100 x 5/8"	#8R x 3/4" 100		
MS24693S273	100	x 5/8"	MS24693S274 100 x 3/4"	<b>Sheet Metal Screws, Truss Hd "A"</b>		
MS24693S274	100	x 3/4"	MS24693S276 50 x 1"	#4R x 1/2" 200 Phillips		
MS24693S276	50	x 1"	MS24693S280 25 x 1-1/2"	#6R x 1/2" 200 Sharp Point		
MS24693S280	25	x 1-1/2"	<b>Brass Instrument Screws</b>			
<b>Round Head Phillips</b>				<b>Sheet Metal Screws, Truss Hd "A"</b>		
AN515B6R12	25	6-32 x 3/4"	#4R x 1/2" 200 Phillips	#6R x 1/2" 200 Sharp Point		

## DELUXE NUT PACK



1000 NUTS - 29 Items, individually packaged. Nuts have been carefully selected to include every commonly used type in aircraft assembly - Self-locking, castle, plain hex, Pal, Tinnerman and all-metal two-lug anchor nuts not found in other hardware assortments. 26-Drawer Cabinet included P/N 04-00900.....

PART NO.	QTY.	SIZE	AN315-4 25 1/4 x 28			
<b>Elastic Stop Nuts</b>						
AN365-632A	25	6-32	AN315-5 25 5/16 x 24			
AN365-832A	25	8-32	<b>Check Nuts</b>			
AN365-1032A	75	10-32	AN315-3 25 10-32	AN316-4 25 1/4 x 28		
AN365-428A	50	1/4 x 28	<b>Palnuts</b>			
AN365-524A	25	5/16 x 24	MS27151-7 25 10-32	MS27151-13 25 1/4 x 28		
<b>All Metal Stop Nuts</b>						
MS21042-3	75	10-32	MS27151-16 25 5/16 x 24	<b>Tinnerman Nuts, Flat Type</b>		
MS21042-4	25	1/4 x 28	#1777-6Z-1 50 #6			
<b>Castle Nuts</b>						
AN310-3	50	10-32	#1778-8Z-1 50 #8	#1779-10Z-1 50 #10		
AN310-4	50	1/4 x 28	<b>Tinnerman Nuts, U Type</b>			
AN310-5	14	5/16 x 24	#1784-6Z-1 50 #6	#A1932-8Z-1 50 #8		
<b>Shear Castle Nuts</b>						
AN320-3	12	10-32	<b>Two Lug Anchor Nuts</b>			
AN320-4	12	1/4 x 28	K1000-08 50 8-32	K1000-3 50 10-32		
AN320-5	12	5/16 x 24	K1000-4 25 1/4 x 28	<b>Plain Hex Nuts</b>		
<b>Plain Hex Nuts</b>						
AN315-3	25	10-32				



## HARDWARE CABINETS

Heavy-duty small parts organizer cabinets. The "see-thru" clear plastic drawers measure 1-1/4" x 2-3/4" x 5-3/4". The plastic cabinets are black. Furnished with adjustable drawer dividers. 16 drawer is white plastic.

**CABINETS**  
16-Drawer..04-01464.....  
26-Drawer..04-01465.....  
44-Drawer..04-01466.....  
64-Drawer..04-01467.....

**PORTABLE ORGANIZERS**  
12-62 compartments. 04-01468.....  
11-46 compartments. 04-01469.....  
Extra Dividers..... 40-501.....



# AIRFRAME NUTS



## AN310 CASTLE, AN320 SHEAR NUTS

Fabricated from steel & cadmium plated per QQ-P-416, Type II, Class 2. AN310 castle nuts are used with drilled-shank bolts, clevis bolts, eye bolts and studs. The slots in the nut accommodate a cotter pin for safety purposes. The thinner AN320 castellated shear nut, with half tensile rating of the AN310 nut, used with clevis bolts & threaded taper pins which are subject to shearing stress only.

AN310, AN320 Dash No.	Thread Size	Cotter Pin Size	AN310 Cad Plated Nuts Price	AN310C Stainless Nuts	AN320 Cad Plated Each	AN320C Stainless Nuts
-3	10-32	AN380-2-2	.	.	.	.
-4	1/4-28		.	.	.	.
-5	5/16-24		.	.	.	.
-6	3/8-24	AN380-3-3	.	.	.	.
-7	7/16-20		.	.	.	.
-8	1/2-20		.	.	.	.
-9	9/16-18	AN380-4-4	.	---	.	.
-10	5/8-18		.	---	.	.
-12	3/4-16	AN380-4-5	.	---	.	.



## AN315 FULL HEX, AN316 THIN CHECK NUTS

Fabricated from steel and cadmium plated per QQ-P-416, Type II, Class 2. The AN315 plain hex nut is of rugged construction and can carry the same high tension load as the AN310 castle nut. It requires an auxiliary locking device such as a check nut or lock washer. AN316 hex check nuts can carry half the tension load of the AN315 nut. They are used as a locking device for plain nuts, set screws, rod ends, etc. Order by AN number. Add R or L after dash number for right-hand or left-hand thread. **Example:** AN316-5L is a thin check nut with 5/16-24 left-hand thread.

AN315	Price Ea.		Thread Size	AN316	Price Ea.	
	R	L			R	L
-640	.	.	6-40	None	None	None
-3	.	.	10-32	None	None	None
-4	.	.	1/4-28	-4	.	.
-5	.	.	5/16-24	-5	.	.
-6	.	.	3/8-24	-6	.	.
-7	.	.	7/16-20	-7	.	.
-8	.	---	1/2-20	-8	.	.
-9	.	---	9/16-18	-9	.	---



## HEX NUT - LOW HEIGHT

Heat treated, cadmium plated steel with dry film lubricant applied. Self-locking. Standard temp. to 450°F.

Thread Size	NAS No.	Part No.	Price Ea.	Thread Size	NAS No.	Part No.	Price Ea.
6-32	679-A06	04-00143	.	5/16-24	679-A5	04-00148	.
8-32	679-A08	04-00144	.	3/8-24	679-A6	04-00149	.
10-32	679-A3	04-00146	.	7/16-20	679-A7	04-00154	.
1/4-28	679-A4	04-00147	.				



## CAP NUTS ("ACORN NUTS")

Use these solid brass cap nuts to attach instrument panels to stud-type shock mounts. Give the panel an attractive, finished appearance and do not introduce magnetic interference.

Part No.	Thread Size	Price Ea.	Part No.	Thread Size	Price Ea.
AC632	6-32	.	AC1032	10-32	.
AC832	8-32	.	AC1428	1/4-28	.

## AN345 PLAIN HEX MACHINE SCREW NUT



Fine Thread Thread	Cad-Plated Cat.#	Price	Stainless Cat.#	Price
10-32	AN345-10	.	AN345C10	.
1/4-28	AN345-428	.	AN345C428	.
5/16	AN345-524	.		
3/8-24	AN345-624	.		

## AN340 PLAIN HEX MACHINE SCREW NUT

Coarse Thread - Use brass type for instruments.



Thread	Dash#	AN340 Cad-Plated Price	AN340C Stainless Price	AN340B Brass Price
4-40	-4	.	.	.
6-32	-6	.	.	.
8-32	-8	.	.	.
10-24	-10	.	.	.



## AN350 WING NUTS

AN350 WING NUTS Fabricated from carbon steel and cadmium plated per specification QQ-P416A, Type II, Class 3. Tensile strength 50,000 PSI. A .070" hole is drilled in one wing for safety wire.

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-632	3-32	---	-4	1/4-28	.
-832	8-32	---	-5	5/16-24	---
-1032	10-32	.			



## MS27151 PAL NUTS

MS27151 engine nuts replace AC356 Pal nuts. They are stamped from 1050 spring steel and cadmium plated per QQ-P-416A, Type II, Class 2.

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-7	10-32	.	-19	3/8-24	.
-13	1/4-28	.	-21	7/16-24	.
-16	5/16-24	.	-24	1/2-20	.

## MS17825 SELF-LOCKING CASTLE NUTS

Manufactured to standard castle or shear nut specifications with a nylon insert added for positive safety. Use it throughout the control system. Should the cotter pin used with castle nuts be overlooked, the nut cannot work loose. The nylon insert will act as a stop nut.



Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-3	10-32	.	-6	3/8-24	.
-4	1/4-28	.	-7	7/16-20	.
-5	5/16-24	.			

## EXHAUST MANIFOLD NUTS



Part No.	Thread Size	Type	Engine Application	Price Each
22022	5/16-24	Brass	Cont. A-65, (C-75 thru O-90, O-200, O-300)	.
STD1410	5/16-18	Steel	Lycoming	.
STD1411	1/4-20	Steel	Lycoming	.

## MS21042 HEX NUTS (LUBED)

These are the same as MS21042- but have a dry film lube (dark grey).

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-L04	4-40	.	-L3	10-32	.	-L5	5/16-24	.
-L06	6-32	.	-L4	1/4-28	.	-L6	3/8-24	.
-L08	8-32	.						

## MS21043 HEX NUTS (STAINLESS STEEL)

These are the same as MS21042 but are made from A-286 stainless steel and are silver plated.

Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each	Dash No.	Thread Size	Price Each
-04	4-40	.	-3	10-32	.	-5	5/16-24	.
-06	6-32	.	-4	1/4-28	.	-6	3/8-24	.
-08	8-32	.						



## AXLE NUTS

Castle type nuts manufactured to MIL Specification MS21025 using 4140 steel. Mild steel nuts are not acceptable for use on certificated aircraft. 1-1/4" dia. nuts for 500 x 5 axles, 1-1/2" dia. nuts for 600 x 6 axles.

Nut Type	Thread Size	Part No.	Price	Nut Type	Thread Size	Part No.	Price
Castle	1-1/4x16	06-11800	.	Round	1-1/4x12	11725	.
Castle	1-1/2x16	06-11900	.	Round	1-1/2x16	11726	.

HA

# STOP NUTS – ANCHOR NUTS



**AN363**  
MS21045  
NAS1021A



**MS21042**

## AN363 & MS21042 ALL METAL STOP NUTS

The AN363 and MS21042 all-metal stop nuts are designed for use in high temperature installations (up to 450°F). The MS21042 nuts are shorter than the AN363 nut but develop the same tensile strength. Fabricated from carbon steel and cadmium plated per specification QQ-P-416C.

AN363 CAD Plated Dash No.	Price Each	AN363C Stainless Dash No.	Price Each	Thread Size	MS21042 Dash No.	Price Each
-632	.	-632	.	6-32	-06	.
-832	.	-832	.	8-32	-08	.
-1032	.	-1032	.	10-32	-3	.
-428	.	-428	.	1/4-28	-4	.
-524	.	-524	.	5/16-24	-5	.
-624	.	-624	.	3/8-24	-6	.
-720	.	---	---	7/16-20	-7	.
-820	.	---	---	1/2-20	-8	.
-918	.	---	---	9/16-18	-9	---

## AN364, AN365 ELASTIC STOP NUTS



**AN364**  
MS21083  
NAS1022N



**AN365**  
MS20365  
NAS1021N

These precision-made nuts are reliable and economical fastening devices. The nylon insert gives a friction grip on the threads of the bolt and holds securely. The AN364 (thin) stop nut is for use in structural applications where the bolt is loaded primarily in shear or in any application where the tensile strength of the regular height AN365 is not required. Cad stop nuts are furnished to military specifications. Insert color designates manufacturer only.

Dash No.	Thread Size	Price Ea.		Dash No.	Thread Size	Price Ea.	
		AN364	AN365			AN364	AN365
-440A	4-40	----	----	-524A	5/16-24	.	.
-440	4-40	----	----	-624A	3/8-24	.	.
-632A	6-32	.	.	-720A	7/16-20	.	.
-832A	8-32	.	.	-820A	1/2-20	.	.
-1024A	10-24	---	---	-918A	9/16-18	.	.
-1032A	10-32	.	.	-1018A	5/8-18	.	.
-428A	1/4-28	.	.	-1216A	3/4-16	.	.

## NSWC ELASTIC STOP NUT KIT

Contains: • AN364-428A (20 qty) • AN364-918A (4 qty) • AN364-624A(22 qty) • AN364-720A (4 qty) • AN364-820A (32 qty)  
P/N 04-01729 .....



## MS21044 / MS21083 STAINLESS STOP NUTS

Part Number	Bolt Size	Price Ea.	Part Number	Bolt Size	Price Ea.
MS21044C04	#4	.	MS21083C4	1/4	.
MS21044C9	9/16	.	MS21083C7	7/16	.
MS21044C10	5/8	.	MS21083C8	1/2	.
MS21083C9	9/16	.	MS21083C10	5/8	.

## COMMERCIAL GRADE STAINLESS STOP NUTS

Dash No.	Thread Size	Price Ea.		Dash No.	Thread Size	Price Ea.	
		Com364	Com365			Com364	Com365
-440	4-40	.	.	-624	3/8-24	---	---
-632	6-32	.	.	-720	7/16-20	---	---
-832	8-32	.	.	-820	1/2-20	---	---
-1024	10-24	---	---	-918	9/16-18	---	---
-1032	10-32	.	.	-1018	5/8-18	---	---
-428	1/4-28	.	.	-1216	3/4-16	---	---
-524	5/16-24	---	---				



**F5000**  
MS21059

## ALL-METAL FLOATING ANCHOR NUTS



**F2000**  
MS21061

Two-Lug Nut	Price Ea.	Thread Size	One-Lug Nut	Price Ea.
MS21059L06	.	6-32	MS21061L06	.
MS21059L08	.	8-32	MS21061L08	.
MS21059L3	.	10-32	MS21061L3	.

## ANCHOR NUTS

Anchor nuts are designed for blind mounted applications where it is impractical to use hex nuts or where it is desirable to have an attached nut for ease of maintenance. Use 3/32" dia. rivets with nut sizes 632, 832, 1032 and 428. Use 1/8" dia. rivets with 524 and 624.

## TWO LUG ANCHOR NUTS



**AN366F**  
NA1, MS21078,  
NAS1023N



**K1000**  
MS21047, NAS680N,  
NAS1023A



**MK1000**  
MS21069, NAS697N

## ELASTIC-INSERT ANCHOR NUT

Part No.	Thread Size	Price Each	Part No.	Thread Size	Price Each
MS21078-06	6-32	.	AN366F-428A	1/4-28	.
AN366F-832	8-32	-	AN366F-524	5/16-24	.
AN366F-1032A	10-32	.			

## ALL METAL ANCHOR NUT

Dash No.	Thread Size	MS21047 (Full Size) Price Ea.	MS21069 (Miniature) Price Ea.	Dash No.	Thread Size	MS21047 (Full Size) Price Ea.	MS21069 (Miniature) Price Ea.
L06	6-32	.	.	-4	1/4-28	.	.
L08	8-32	.	.	-5	5/16-24	.	---
L3	10-32	.	.	-6	3/8-24	.	---

## ONE LUG ANCHOR NUTS



**NA17**  
MS21080, NAS1025N



**K2000**  
MS21051, NAS682A, NAS1025A



**MK2000**  
MS21071, NAS696A

Part No.	Price Each	Thread Size	All-Metal Anchor Nut Price Each	
			Dash No.	MS21051 (Full Size) / MS21071 (Miniature)
		6-32	L06	.
		8-32	L08	.
MS21080-3	.	10-32	L3	.
		1/4-28	L4	.



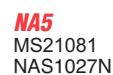
## ANCHOR NUT, DIMPLED, STANDARD SIZE

Anchor Nut, Dimpled Standard Size

K1100-0 ..... 6-32 Thread ..... P/N 04-01724 .....

K1100-08 ..... 8-32 Thread ..... P/N 04-01725 .....

Anchor Nut, One Leg, Dimpled, Standard size  
MS21053-L08 ..... 8-32 Thread ..... P/N 04-01726 .....



**NA5**  
MS21081  
NAS1027N

## CORNER NUTS



**K3000**  
MS21055  
NAS684A  
NAS1027A

All-Metal Anchor Nut	Price Ea.	Size	Anchor Nut	Price Ea.
MS21081-3	.	8-32	MS21055L08	.
MS21081-4	.	10-32	MS21055L3	.
		1/4-28	MS21055L4	.



NA27 (AN1033N)

## RIGHT ANGLE NUTS (Fixed)

Part No.	Thread Size	Price Ea.
22NA7-68-62	6-32	.



NA27 (AN256F)

## RIGHT ANGLE FLOATING NUTS

Part No.	Thread Size	Price Ea.
22NA27-22-62	6-32	.
22NA27-22-82	8-32	---

## TWO LUG MINI ANCHOR NUTS



Part Number	Thread Size	Price Each
MS21075L06	6-32	.
MS21075L08	8-32	.
MS21075L3	10-32	.
MS21059L4	1/4-28	.
MF500-3 (Surplus Material)	10-32	.

# TINNERMAN FASTENERS

## TINNERMAN NUTS FOR SHEET METAL SCREWS



"B"-type Sheet Metal Screw

These speed nuts are self-locking steel fasteners. Locking action is derived from the force exerted by the two arched prongs against the root of the screw thread and by the spring tension of the prongs and base. The combined forces of the thread lock and spring tension provide a vibration proof fastening. Speed nuts retain their spring tension and may be used repeatedly without losing their self-locking effectiveness. Suitable for numerous non-structural applications.

**Finish:** Phosphate-coated with three coats of olive drab paint.

**Important:** Speed nuts for aircraft are designed to fit standard AN530-AN531 type B sheet metal screws only. Do not use pointed type A sheet metal screws with aircraft Speed nuts. There is a difference in root diameter and thread pitch. Screw lengths: B type sheet metal screws have a blunt taper at the end. To be certain the fastener prongs grip on the full root diameter, the screw should protrude two to three threads beyond the prongs. See the illustration.

## FLAT TYPE (NAS 446)

Used to replace threaded nuts, lock washers, and spanner washers; weigh less than other types of self-locking aircraft fasteners. Can be applied faster, easier, and are vibration resistant. Provide maximum holding power at minimum cost per fastener. Turned-up ends prevent scoring of surfaces. Use with type B tapping screws.

## "U" TYPE (NAS 395)



Part No.	Screw Size	Price ea.
A1776-4Z-1D	#4	.
A1777-6Z-1D	#6	.
A1778-8Z-1D	#8	.
A1779-10Z-1D	#10	.

## ANCHOR NUTS (NAS 444)

Riveted or welded in position. Attach access plates, doors or any part that must be fastened securely, yet easily removed with fasteners retained in a blind location. Install with AN426AD-3 rivets.



Part No.	Screw Size	Price/Ea.
A6195-6Z-1D	#6	.
A6195-8Z-1D	#8	.



## LHA 4972 FLOATING CLIPNUT CADMIUM-PLATED STEEL

Part No.	Thread	Price Each
4972-5-62	6-32	.
4972-6-82	8-32	.
LHA4972-1032	10-32	.

## INSTRUMENT MOUNTING NUTS



Cage type. Permit mounting of aircraft instruments from the front of the panel. No charge in panel or instrument design required. Non-magnetic (speed nut is brass; cage is phosphor bronze). Conform to MIL-N-3336. Cage is easily compressed with finger-pressure to allow insertion of legs into clearance holes. When fully inserted and pressure is released, legs spring apart; retain SPEED NUT in screw-receiving position. Turned-down corners hold firm against force of inserting screw and screw-tightening torque. All instrument mounting nuts listed below take a 6-32 machine screw.

Tinnerman Part No.	Our Part No.	NAS Part No.	Instrument Thickness	Price Ea.
A8938-632-493	MS33737-9C	487-13	.062	.
A8939-632-493	MS33737-10C	487-14	.091	.
A6939-632-493	MS33737-11C	487-15	.125	.
A8940-632-493	MS33737-12C	487-16	.187	.
A8941-632-493	MS33737-13C	487-17	.250	.
A8942-632-493	MS33737-14C	487-18	.313	.
A8943-632-493	MS33737-15C	487-20	.375	.
A8944-632-493	MS33737-16C	487-21	over .375	.

## MONADNOCK CLIP NUTS

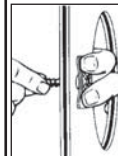
High strength Forged hex nuts suitable for structural and non-structural applications in metal, plastic and composite materials.



Size	Distance	Edge Tkns	Part Number	Price Ea.
6-32	.180-.120	.030-.051	04-00151	.
8-32	.310-.500	.020-.090	04-00152	.
10-32	.350-.500	.020-.090	04-00153	.

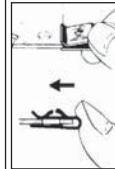
## HOW TO APPLY SPEED NUT FASTENERS

### FLAT TYPE

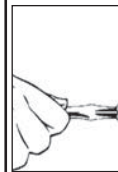


Fastener is positioned over screw clearance hole with screw-engaging prongs pointing up or outward. Screw is started into nut by hand from the underside.

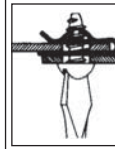
### "U" TYPE



Push into position with thumb until extrusion on lower leg snaps into screw hole. The fastener "floats" in screw-receiving position to correct for normal misalignment in panel mounting holes.



Screw can be power-driven into locked position (when base arch of fastener is flat) or a hand screw driver can be used. No wrench is required, finger pressure will prevent it from turning.



Place second panel in position & drive screw. Access to opposite side is unnecessary. Flush mounting can be made by embossing either panel.

## "U" TYPE (NAS 395)

Snaps over edge of panels or into center hole locations. Holds itself in place for blind assembly. "Floats" free for easy hole alignment.



Part Number	TypeB Scrw Size	Design Variation	P-panel Thickness Range	A Length	B Length	C-max. ctr. hole to edge	G-panel hole dia.	T-mat'l. Thkness	Price
A1784-6Z-1D	#6	E	.025-.051	0.61	0.44	0.281	0.250	0.025	.
A1785-6Z-1D	#6	E	.025-.064	0.84	0.44	0.500	0.281	0.025	.
A1789-8Z-1D	#8	E	.025-.051	0.61	0.44	0.281	0.250	0.028	.
A1787-8Z-1D	#8	F	.025-.064	0.84	0.44	0.500	0.281	0.028	.
A1788-8Z-1D	#8	A E	.025-.064	0.84	0.44	0.500	0.170	0.028	.
A1348-8Z-1D	#8	A E	.025-.064	0.73	0.50	0.343	0.170	0.028	.
A1932-8Z-1D	#8	B E	.032-.051	0.58	0.50	0.265	0.343	0.025	.
A1786-8Z-1D	#8	C E H	.040-.051	0.53	0.50	0.218	0.250	0.028	.
A178710Z-1D	#10	E	.025-.064	0.84	0.44	0.500	0.281	0.031	.
A1758-10Z-1D	#10	E	.081-.094	0.62	0.44	0.281	0.281	0.031	.

HA

# MACHINE SCREWS

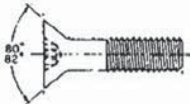
## MS27039 & MS27039C MACHINE SCREWS



Pan head low alloy steel machine screws have 125,000 to 145,000 psi tensile strength with cadmium plate finish to QQ-P-416, Type 2, Class 3. MS27039C screws are stainless steel Manufactured to MIL-S-6050 or MIL-8695. Equivalent to NAS 220.

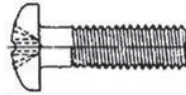
Part Number	Diam.-Thrd. Size	Length (In.)	MS27039 Price	MS27039C Price
MS27039-0804	8-32	9/32	.	.
MS27039-0805	8-32	11/32	.	.
MS27039-0806	8-32	13/32	----	----
MS27039-0807	8-32	15/32	.	----
MS27039-0808	8-32	17/32	.	----
MS27039-0809	8-32	19/32	.	----
MS27039-0810	8-32	21/32	.	----
MS27039-0811	8-32	23/32	.	.
MS27039-0812	8-32	25/32	.	----
MS27039-0813	8-32	27/32	.	.
MS27039-0814	8-32	29/32	.	.
MS27039-0815	8-32	31/32	.	.
MS27039-0816	8-32	1-1/32	----	----
MS27039-0817	8-32	1-3/32	.	.
MS27039-0818	8-32	1-5/32	.	----
MS27039-0819	8-32	1-7/32	.	----
MS27039-0820	8-32	1-9/32	.	----
MS27039-0821	8-32	1-11/32	.	----
MS27039-0822	8-32	1-13/32	.	----
MS27039-0823	8-32	1-15/32	.	----
MS27039-0824	8-32	1-17/32	.	----
MS27039-1-04	10-32	9/32	.	.
MS27039-1-05	10-32	11/32	.	.
MS27039-1-06	10-32	13/32	.	.
MS27039-1-07	10-32	15/32	.	----
MS27039-1-08	10-32	17/32	.	----
MS27039-1-09	10-32	19/32	.	.
MS27039-1-10	10-32	21/32	.	.
MS27039-1-11	10-32	23/32	.	.
MS27039-1-12	10-32	25/32	.	----
MS27039-1-13	10-32	27/32	.	.
MS27039-1-14	10-32	29/32	.	----
MS27039-1-15	10-32	31/32	.	.
MS27039-1-16	10-32	1-1/32	----	----
MS27039-1-17	10-32	1-3/32	.	.
MS27039-1-18	10-32	1-5/32	.	.
MS27039-1-19	10-32	1-7/32	.	.
MS27039-1-20	10-32	19/32	.	.
MS27039-1-21	10-32	1-11/32	.	.
MS27039-1-22	10-32	1-13/32	.	.
MS27039-1-23	10-32	1-15/32	.	.
MS27039-1-24	10-32	1-17/32	.	.
MS27039-1-25	10-32	1-19/32	.	----
MS27039-1-26	10-32	1-21/32	.	----
MS27039-1-27	10-32	1-23/32	.	----
MS27039-1-28	10-32	1-25/32	.	----
MS27039-1-29	10-32	1-27/32	.	----
MS27039-1-30	10-32	1-29/32	.	----
MS27039-1-31	10-32	1-31/32	.	----
MS27039-1-32	10-32	2-1/32	.	----
MS27039-4-06	1/4-28	13/32	.	.
MS27039-4-07	1/4-28	15/32	.	.
MS27039-4-08	1/4-28	17/32	.	.
MS27039-4-09	1/4-28	19/32	.	.
MS27039-4-10	1/4-28	21/32	.	.
MS27039-4-11	1/4-28	23/32	.	.
MS27039-4-12	1/4-28	25/32	.	.
MS27039-4-13	1/4-28	27/32	.	.
MS27039-4-14	1/4-28	29/32	.	.
MS27039-4-15	1/4-28	31/32	.	.
MS27039-4-16	1/4-28	1-1/32	.	.
MS27039-4-17	1/4-28	1-3/32	.	----
MS27039-4-18	1/4-28	1-5/32	.	----
MS27039-4-19	1/4-28	1-7/32	.	----
MS27039-4-20	1/4-28	1-9/32	.	----
MS27039-4-21	1/4-28	1-9/32	.	----
MS27039-4-22	1/4-28	1-9/32	.	----
MS27039-4-23	1/4-28	1-9/32	.	----
MS27039-4-24	1/4-28	1-9/32	.	----

## MS35190 MACHINE SCREWS (CROSS RECESSED)



82° flat head machine screws have 55,000psi minimum tensile strength and feature cadmium plate finish per QQ P-416, Type 2, Class 3. Manufactured from carbon steel to Federal Standard #66.

Part Number	Old AN505R	Diam.-Thrd. Size	Length (In.)	Price
MS35190-221	-4R4	4-40	1/4	.
MS35190-222	-4R5	4-40	5/16	.
MS35190-225	-4R8	4-40	1/2	.
MS35190-226	-4R10	4-40	5/8	.
MS35190-234	-6R4	6-32	1/4	.
MS35190-236	-6R6	6-32	3/8	.
MS35190-238	-6R8	6-32	1/2	.
MS35190-239	-6R10	6-32	5/8	.
MS35190-240	-6R12	6-32	3/4	.
MS35190-250	-8R5	8-32	5/16	.
MS35190-253	-8R8	8-32	1/2	.
MS35190-254	-8R10	8-32	5/8	.



## MS35207 MACHINE SCREWS (CROSS RECESSED)

These pan head machine screws have 55,000 psi minimum tensile strength and are cadmium plated to Specification QQ-P-416, Type 2, Class 3. Manufactured from carbon steel per Federal Standard #66.

Part Number	Old AN520R	Diam.-Thrd. Size	Length (In.)	Price ea.
MS35207-260	-10R5	10-32	5/16	.
MS35207-261	-10R6	10-32	3/8	.
MS35207-262	-10R7	10-32	7/16	.
MS35207-263	-10R8	10-32	1/2	.
MS35207-264	-10R10	10-32	5/8	.
MS35207-265	-10R12	10-32	3/4	.
MS35207-266	-10R14	10-32	7/8	.
MS35207-267	-10R16	10-32	1	.
MS35207-268	-10R20	10-32	1-1/4	.
MS35207-269	-10R24	10-32	1-1/2	.
MS35207-270	-10R28	10-32	1-3/4	.
MS35207-271	-10R32	10-32	2	.



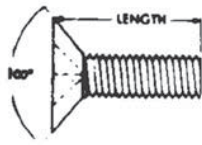
## MS35206 MACHINE SCREWS (CROSS RECESSED)

These pan head machine screws feature 60,000 psi minimum tensile strength and are cadmium plated to specification QQ-P-416, Type 2, Class 3. Manufactured from carbon steel to Federal Standard #66, these screws can be used as replacements for AN526 machine screws. Phillips head.

Part Number	Old AN515R	Diam.-Thrd. Size	Length (In.)	Price ea.
MS35206-203	-2R2	2-56	1/4	.
MS35206-204	-2R5	2-56	5/16	.
MS35206-205	-2R6	2-56	3/8	.
MS35206-206	-2R7	2-56	7/16	.
MS35206-207	-2R8	2-56	1/2	.
MS35206-208	-2R10	2-56	5/8	.
MS35206-209	-2R12	2-56	3/4	.
MS35206-212	-4R3	4-40	3/16	.
MS35206-213	-4R4	4-40	1/4	--
MS35206-214	-4R5	4-40	5/16	.
MS35206-215	-4R6	4-40	3/8	.
MS35206-216	-4R7	4-40	7/16	.
MS35206-217	-4R8	4-40	1/2	.
MS35206-218	-4R10	4-40	5/8	.
MS35206-219	-4R12	4-40	3/4	.
MS35206-220	-4R14	4-40	7/8	.
MS35206-221	-4R16	4-40	1	.
MS35206-222	-4R20	4-40	1-1/4	.
MS35206-223	-4R24	4-40	1-1/2	.
MS35206-226	-6R4	6-32	1/4	.
MS35206-227	-6R5	6-32	5/16	.
MS35206-228	-6R6	6-32	3/8	.
MS35206-229	-6R7	6-32	7/16	.
MS35206-230	-6R8	6-32	1/2	.
MS35206-231	-6R10	6-32	5/8	.
MS35206-232	-6R12	6-32	3/4	.
MS35206-233	-6R14	6-32	7/8	.
MS35206-234	-6R16	6-32	1	.
MS35206-235	-6R20	6-32	1-1/4	.
MS35206-236	-6R24	6-32	1-1/2	.
MS35206-238	-6R32	6-32	2	.
MS35206-241	-8R4	8-32	1/4	.
MS35206-242	-8R5	8-32	5/16	.
MS35206-243	-8R6	8-32	3/8	.
MS35206-244	-8R7	8-32	7/16	.
MS35206-245	-8R8	8-32	1/2	.
MS35206-246	-8R10	8-32	5/8	.
MS35206-247	-8R12	8-32	3/4	.
MS35206-248	-8R14	8-32	7/8	.
MS35206-249	-8R16	8-32	1	.
MS35206-250	-8R20	8-32	1-1/4	.
MS35206-251	-8R24	8-32	1-1/2	.
MS35206-252	-8R28	8-32	1-3/4	.
MS35206-253	-8R32	8-32	2	.
MS35206-261	-10R6	10-24	3/8	.
MS35206-262	-10R7	10-24	7/16	.
MS35206-263	-10R8	10-24	1/2	.
MS35206-264	-10R10	10-24	5/8	.
MS35206-265	-10R12	10-24	3/4	.
MS35206-267	-10R16	10-24	1	.

# MACHINE SCREWS

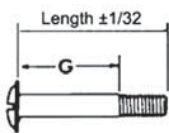
## MS24693 & MS24693C MACHINE SCREWS



(FORMERLY AN 507)

These non-structural screws have a 100° countersunk flat head. Cadmium plated, Type 2, Class 3. Tensile strength 55,000 PSI. For both CAD plated and Stainless MS24693C are stainless steel.

Thread	Length	MS24693 Cad Plated P/N	Price Each	MS24693C Stainless P/N	Price Each
4-40	3/8	MS24693S4	.	MS24693C4	.
	7/16	MS24693S5	---	---	---
	1/2	MS24693S6	.	MS24693C6	.
	5/8	MS24693S7	---	MS24693C7	.
6-32	1	MS24693S10	.	MS24693C10	.
	1/4	MS24693S24	.	MS24693C24	.
	3/8	MS24693S26	.	MS24693C26	.
	7/16	MS24693S27	---	MS24693C27	.
	1/2	MS24693S28	.	MS24693C28	.
	5/8	MS24693S29	.	MS24693C29	---
	3/4	MS24693S30	.	MS24693C30	.
	1	MS24693S32	.	MS24693C32	.
8-32	1/4	MS24693S46	.	MS24693C46	.
	3/8	MS24693S48	.	MS24693C48	.
	7/16	MS24693S49	---	MS24693C49	.
	1/2	MS24693S50	.	MS24693C50	.
	5/8	MS24693S51	.	MS24693C51	.
	3/4	MS24693S52	.	MS24693C52	.
	1	MS24693S54	.	MS24693C54	.
	1-1/4	MS24693S56	---	MS24693C56	.
10-32	1/4	MS24693S268	.	MS24693C268	.
	3/8	MS24693S270	.	MS24693C270	.
	7/16	MS24693S271	---	MS24693C271	.
	1/2	MS24693S272	.	MS24693C272	.
	5/8	MS24693S273	.	MS24693C273	.
	3/4	MS24693S274	.	MS24693C274	.
	1	MS24693S276	.	MS24693C276	.
	1-1/4	MS24693S278	---	MS24693C278	.
1/4-28	7/16	---	---	MS24693C293	.
	1/2	MS24693S294	---	MS24693C294	.
	5/8	MS24693S295	---	MS24693C295	.
	1	---	---	MS24693C298	.



## AN525 WASHER HEAD SCREWS

High-strength machine screws fabricated from alloy steel per specification AMS6300. Tensile strength 125,000 PSI. Cadmium plated per QQ-P-416, Type II, Class 3. Cross-recessed head.

Dash No.	Length In.	Grip In.	Thread Size	Price Each
-832R6	3/8	1/32	8-32	.
-832R7	7/16	1/16		.
-832R8	1/2	1/8		.
-832R10	5/8	7/32		.
-832R12	3/4	11/32		.
-832R14	7/8	15/32		.
-832R16	1	19/32		.
-832R20	1-1/4	27/32		.
-10R6	3/8	1/32	10-32	.
-10R7	7/16	1/16		.
-10R8	1/2	1/8		.
-10R9	9/16	5/32		.
-10R10	5/8	7/32	10-32	.
-10R12	3/4	11/32		.
-10R14	7/8	15/32		.
-10R16	1	19/32		.
-10R18	1-1/8	23/32		.
-10R20	1-1/4	27/32		.
-10R24	1-1/2	1-3/32		.
-416R14	7/8	15/32		1/4-28
-416R16	1	19/32	.	
-416R18	1-1/8	23/32	.	
-416R20	1-1/4	27/32	---	

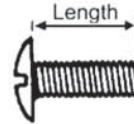
## AN526 MACHINE SCREWS

Truss-head non-structural machine screws made of carbon steel, cadmium plated. Minimum tensile strength 55,000 PSI. Available in slot head or Phillips recessed head.

Thread	Length	Phillips Part No.	Price Ea.	Slotted Part No.	Price Ea.
4-40	1/2	AN526-440R8	.	---	---
	1	AN526-440R16	----	---	---
6-32	1/4	AN526-632R4	.	---	---
	5/16	AN526-632R5	.	---	---
	3/8	AN526-632R6	.	AN526-632-6	.
	7/16	AN526-632R7	.	---	---
	1/2	AN526-632R8	.	AN526-632-8	.
	9/16	AN526-632R9	.	---	---
	5/8	AN526-632R10	.	AN526-632-10	.
	3/4	AN526-632R12	.	AN526-632-12	.
8-32	7/8	AN526-632R14	.	---	---
	1	AN526-632R16	.	---	---
	1/4	AN526-832R4	.	---	---
	5/16	AN526-832R5	.	---	---
	3/8	AN526-832R6	.	---	---
	7/16	AN526-832R7	.	---	---
	1/2	AN526-832R8	.	AN526-832-8	.
	9/16	AN526-832R9	.	---	---
10/32	5/8	AN526-832R10	.	AN526-832-10	.
	3/4	AN526-832R12	.	AN526-832-12	.
	7/8	AN526-832R14	.	---	---
	1	AN526-832R16	.	AN526-832-16	.
	1/4	AN526-1032R4	.	---	---
	5/16	AN526-1032R5	.	---	---
	3/8	AN526-1032R6	.	---	---
	7/16	AN526-1032R7	.	---	---
	1/2	AN526-1032R8	.	---	---
	9/16	AN526-1032R9	.	---	---
10-32	5/8	AN526-1032R10	.	AN526-1032-10	.
	3/4	AN526-1032R12	.	AN526-1032-12	.
	7/8	AN526-1032R14	.	AN526-1032-14	.
	1	AN526-1032R16	.	---	---
	1-1/8	AN526-1032R18	.	---	---
	1-1/4	AN526-1032R20	.	AN526-1032-20	.
	1-1/2	AN526-1032R24	.	---	---
	1-3/4	AN526-1032R28	.	---	---
2	AN526-1032R32	.	---	---	

## AN526C STAINLESS STEEL MACHINE SCREWS

Stainless steel Phillips and slotted, Use slotted screws for antiques.

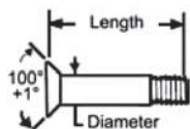


Thread	Length	Phillips Part No.	Price Ea.	Slotted Part No.	Price Ea.
4-40	1/2	AN526C-440R8	.	---	---
	1/4	AN526C-632R4	.	AN526C-632-4	.
6-32	3/8	AN526C-632R6	.	---	---
	1/2	AN526C-632R8	.	AN526C-632-8	.
	5/8	AN526C-632R10	.	AN526C-632-10	.
	3/4	AN526C-632R12	.	---	---
8-32	1	AN526C-632R16	.	AN526C-632-16	.
	1/4	AN526C-832R4	.	---	---
	3/8	AN526C-832R6	.	---	---
	1/2	AN526C-832R8	.	AN526C-832-8	.
	5/8	AN526C-832R10	.	AN526C-832-10	.
	3/4	AN526C-832R12	.	AN526C-832-12	.
10-32	1	AN526C-832R16	.	AN526C-832-16	.
	1/4	AN526C-1032R4	.	---	---
	3/8	AN526C-1032R6	.	AN526C-1032-6	.
	1/2	AN526C-1032R8	.	AN526C-1032-8	.
	5/8	AN526C-1032R10	.	AN526C-1032-10	.
	3/4	AN526C-1032R12	.	AN526C-1032-12	.
	1	AN526C-1032R16	.	---	---
	1-1/4	AN526C-1032R20	----	---	---
1/4-20	1-1/2	AN526C-1032R24	.	---	---
	1/2	AN526C-420R8	.	---	---
1/4-28	1/2	AN526C-428R8	.	---	---
	3/4	AN526C-428R12	.	---	---
	1-1/8	---	---	AN526C-428-18	.

Note: Some sizes of AN526C screws are furnished as commercial equipment as AN screws are no longer available.

HA

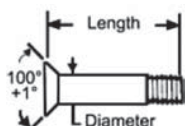
# FILLISTER HEAD SCREWS – MACHINE SCREWS



## MS24694 MACHINE SCREWS (FORMERLY AN509)

These structural screws have a 100° countersunk head. Cadmium plated per QQ-P-416, Type II, Class 3. Minimum tensile strength 125,000 PSI.

MS24694 Dash No.	AN509 Dash No.	Length In.	Grip In.	Thread Size	Price Each	MS24694 Dash No.	AN509 Dash No.	Length In.	Grip In.	Thread Size	Price Each	
-S1	-8R4	9/32	3/32	8-32	.	-S65	-10R23	1-15/32	1	10-32	.	
-S2	-8R5	11/32		8-32	.	-S66	-10R24	1-17/32	1-1/16	10-32	.	
-S3	-8R6	13/32		8-32	.	-S67	-10R25	1-19/32	1-1/8	10-32	---	
-S4	-8R7	15/32		8-32	.	-S68	-10R26	1-21/32	1-3/16	10-32	---	
-S5	-8R8	17/32		8-32	.	-S69	-10R27	1-23/32	1-1/4	10-32	---	
-S7	-8R10	21/32	7/32	8-32	.	-S70	-10R28	1-25/32	1-5/16	10-32	.	
-S8	-8R11	23/32	9/32	8-23	---	-S71	-10R29	1-27/32	1-3/8	10-32	---	
-S9	-8R12	25/32	11/32	8-32	.	-S72	-10R30	1-29/32	1-7/16	10-32	.	
-S10	-8R13	27/32	13/32	8-32	---	-S74	-10R32	2-1/32	1-9/16	10-32	.	
-S11	-8R14	29/32	15/32	8-32	.	-S75	-10R33	2-3/32	1-5/8	10-32	.	
-S12	-8R15	31/32	17/32	8-32	---	-S76	-10R34	2-5/32	1-11/16	10-32	.	
-S13	-8R16	1-1/32	19/32	8-32	.	-S79	-10R37	2-11/32	1-7/8	10-32	.	
-S14	-8R17	1-1/32	21/32	8-32	---	-S82	-10R40	2-17/32	2-1/16	10-32	.	
-S15	-8R18	1-5/32	23/32	8-32	.	-S84	-10R42	2-21/32	2-3/16	10-32	.	
-S16	-8R19	1-7/32	25/32	8-32	---	-S88	-10R46	2-29/32	2-7/16	10-32	.	
-S17	-8R20	1-9/32	27/32	8-32	.	-S90	-10R48	3-1/32	2-9/16	10-32	.	
-S18	-8R21	1-11/32	29/32	8-32	.	-S93	-416R6	13/32	9/64	1/4-28	---	
-S19	-8R22	1-13/32	31/32	8-32	.	-S94	-416R7	15/32		1/4-28	---	
-S20	-8R23	1-15/32	1-1/32	8-32	---	-S95	-416R8	17/32		1/4-28	---	
-S21	-8R24	1-17/32	1-3/32	8-32	.	-S96	-416R9	19/32		1/4-28	---	
-S28	-8R31	1-31/32	1-17/32	8-32	.	-S97	-416R10	21/32		1/4-28	.	
-S29	-8R32	2-1/32	1-19/32	8-32	.	-S98	-416R11	23/32	3-16	1/4-28	---	
-S31	-8R34	2-5/32	1-23/32	8-32	.	-S99	-416R12	25/32	1/4	1/4-28	.	
-S46	-10R4	9/32	7/64	10-32	---	-S100	-416R13	27/32	5/16	1/4-28	.	
-S47	-10R5	11/32		10-32	---	-S101	-416R14	29/32	3/8	1/4-28	.	
-S48	-10R6	13/32		10-32	.	-S102	-416R15	31/32	7/16	1/4-28	.	
-S49	-10R7	15/32		10-32	.	-S103	-416R16	1-1/32	1/2	1/4-28	.	
-S50	-10R8	17/32		10-32	.	-S104	-416R17	1-3/32	9/16	1/4-28	.	
-S51	-10R9	19/32	3/16	10-32	.	-S105	-416R18	1-5/32	5/8	1/4-28	.	
-S52	-10R10	21/32		10-32	.	-S106	-416R19	1-7/32	11/16	1/4-28	.	
-S53	-10R11	23/32		1/4	10-32	.	-S107	-416R20	1-9/32	3/4	1/4-28	---
-S54	-10R12	25/32		5/16	10-32	.	-S108	-416R21	1-11/32	13/16	1/4-28	---
-S55	-10R13	27/32		3/8	10-32	.	-S109	-416R22	1-13/32	7/8	1/4-28	.
-S56	-10R14	29/32	7/16	10-32	.	-S110	-416R23	1-15/32	15/16	1/4-28	.	
-S57	-10R15	31/32	1/2	10-32	---	-S111	-416R24	1-17/32	1	1/4-28	.	
-S58	-10R16	1-1/32	9/16	10-32	.	-S113	-416R26	1-21/32	1-1/8	1/4-28	.	
-S59	-10R17	1-3/32	5/8	10-32	.	-S115	-416R28	1-25/32	1-1/4	1/4-28	.	
-S60	-10R18	1-5/32	11/16	10-32	.	-S119	-416R32	2-1/32	1-1/2	1/4-28	.	
-S61	-10R19	1-7/32	3/4	10-32	---	-S121	-416R34	2-5/32	1-5/8	1/4-28	.	
-S62	-10R20	1-9/32	13/16	10-32	.	-S123	-416R36	2-9/32	1-3/4	1/4-28	.	
-S63	-10R21	1-11/32	7/8	10-32	---	-S148	-516R16	1-1/32	15/32	5/16-24	.	
-S64	-10R22	1-13/32	15/16	10-32	.	-S178	-516R46	2-29/32	2-11/32	5/16-24	.	



## MS24694C STAINLESS STEEL MACHINE SCREWS

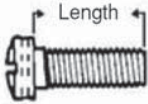
Same style screws as MS24694, except stainless steel. Phillips head. (Formerly AN509C)

MS Part No.	AN509C No.	Thread Size	Length Inches	Price ea.
MS24694C1	-8R4	8-32	9/32	.
MS24694C2	-8R5	8-32	11/32	.
MS24694C3	-8R6	8-32	13/32	.
MS24694C4	-8R7	8-32	15/32	.
MS24694C5	-8R8	8-32	17/32	.
MS24694C6	-8R9	8-32	19/32	.
MS24694C7	-8R10	8-32	21/32	.
MS24694C8	-8R11	8-32	23/32	.
MS24694C9	-8R12	8-32	25/32	.
MS24694C10	-8R13	8-32	27/32	.
MS24694C11	-8R14	8-32	29/32	.
MS24694C13	-8R16	8-32	1-1/32	.
MS24694C14	-8R17	8-32	1-3/32	.
MS24694C15	-8R18	8-32	1-5/32	.
MS24694C46	-10R4	10-32	9/32	.
MS24694C47	-10R5	10-32	11/32	.
MS24694C48	-10R6	10-32	13/32	.

MS Part No.	AN509C No.	Thread Size	Length Inches	Price ea.
MS24694C49	-10R7	10-32	15/32	.
MS24694C50	-10R8	10-32	17/32	.
MS24694C51	-10R9	10-32	19/32	.
MS24694C52	-10R10	10-32	21/32	.
MS24694C53	-10R11	10-32	23/32	.
MS24694C54	-10R12	10-32	25/32	.
MS24694C55	-10R13	10-32	27/32	.
MS24694C56	-10R14	10-32	29/32	.
MS24694C57	-10R15	10-32	31/32	.
MS24694C58	-10R16	10-32	1-1/32	.
MS24694C59	-10R17	10-32	1-3/32	.
MS24694C60	-10R18	10-32	1-5/32	.
MS24694C61	-10R19	10-32	1-7/32	.
MS24694C62	-10R20	10-32	1-9/32	.
MS24694C92		1/4-28	3/8	.



# FILLISTER HEAD SCREWS - DRIVE SCREWS



## AN500, AN501 DRILLED FILLISTER HEADSCREWS

AN500 (coarse thread) & AN501 (fine thread) slotted fillister head screws are fabricated from carbon steel. Tensile strength 60,000 PSI. Cadmium plated, Type II Class 3.  
 \* "A" IN DASH NO. DENOTES DRILLED HEAD

AN500 (Coarse Thread)				
AN500 Dash No.*	MS35265 Dash No.	Length (In.)	Thread Size	Price Each
-A4-3	MS35265-12	3/16	4-40	.
-A4-4	MS35265-13	1/4	4-40	.
-A4-5	MS35265-14	5/16	4-40	.
-A4-6	MS35265-15	1/4	4-40	.
-A4-7	MS35265-16	5/16	4-40	.
-A4-8	MS35265-17	1/4	4-40	.
-A4-10	MS35265-18	5/16	4-40	.
-A4-12	MS35265-19	1/4	4-40	.
-A6-4	MS35265-26	1/4	6-32	.
-A6-5	MS35265-27	5/16	6-32	.
-A6-6	MS35265-28	3/8	6-32	.
-A6-7	MS35265-29	7/16	6-32	.
-A6-8	MS35265-30	1/2	6-32	.
-A6-10	MS35265-31	5/8	6-32	.
-A6-12	MS35265-32	3/4	6-32	.
-A6-14	MS35265-33	7/8	6-32	.
-A8-4	MS35265-41	1/4	8-32	.
-A8-5	MS35265-42	5/16	8-32	.
-A8-6	MS35265-43	3/8	8-32	.
-A8-7	MS35265-44	7/16	8-32	.
-A8-8	MS35265-45	1/2	8-32	.
-A8-10	MS35265-46	5/8	8-32	.
-A8-12	MS35265-47	3/4	8-32	.
-A8-14	MS35265-48	7/8	8-32	.
-A8-16	MS35265-49	1	8-32	.
-A10-4	MS35265-59	1/4	10-24	.
-A10-5	MS35265-60	5/16	10-24	.
-A10-6	MS35265-61	3/8	10-24	.
-A10-7	MS35265-62	7/16	10-24	.
-A10-8	MS35265-63	1/2	10-24	.
-A10-10	MS35265-64	5/8	10-24	.
-A10-12	MS35265-65	3/4	10-24	.
-A10-16	MS35265-66	1	10-24	.
-A416-8	MS35265-79	1/2	1/4-20	.
-A416-10	MS35265-80	5/8	1/4-20	.
-416-12	MS35265-81	3/4	1/4-20	.
AN501 (Fine Thread)				
AN501 Dash No.*	MS35266 Dash No.	Length (In.)	Thread Size	Price Each
-8-12	-47	3/4	8-36	---
-A10-4	-59	1/4	10-32	.
-A10-6	-61	3/8	10-32	.
-A10-8	-63	1/2	10-32	.
-A10-10	-64	5/8	10-32	.
-A10-12	-65	3/4	10-32	.
-A10-14	-66	7/8	10-32	.
-A10-16	-67	1	10-32	.
-A10-20	-68	1-1/4	10-32	.

AN500AD (Coarse Thread/Stainless Steel)				
AN500 Dash No.*	MS35275 Dash No.	Length (In.)	Thread Size	Price Each
-AD2-2	-201	1/8	2/56	.
-AD2-3	-202	3/16	2/56	.
-AD2-4	-203	1/4	2/56	.
-AD2-5	-204	5/16	2/56	.
-AD2-6	-205	3/8	2/56	.
-AD2-7	-206	7/16	2/56	.
-AD2-8	-207	1/2	2/56	.
-AD2-10	-208	5/8	2/56	.
-AD2-12	-209	3/4	2/56	.
-AD4-2	-211	1/8	4-40	.
-AD4-3	-212	3/16	4-40	.
-AD4-4	-213	1/4	4-40	.
-AD4-6	-215	3/8	4-40	.
-AD4-7	-216	7/16	4-40	.
-AD4-8	-217	1/2	4-40	.
-AD4-10	-218	5/8	4-40	.
-AD4-12	-219	3/4	4-40	.
-AD4-14	-220	7/8	4-40	.
-AD4-16	-221	1	4-40	.
-AD6-4	-226	1/4	6-32	.
-AD6-5	-227	5/16	6-32	.
-AD6-6	-228	3/8	6-32	.
-AD6-7	-229	7/16	6-32	.
-AD6-8	-230	1/2	6-32	.
-AD6-10	-231	5/8	6-32	.
-AD6-12	-232	3/4	6-32	.
-AD6-14	-233	7/8	6-32	.
-AD6-16	-234	1	6-32	.
-AD8-5	-242	5/16	8-32	.
-AD8-6	-243	3/8	8-32	.
-AD8-7	-244	7/16	8-32	.
-AD8-8	-245	1/2	8-32	.
-AD8-10	-246	5/8	8-32	.
-AD8-12	-247	3/4	8-32	.
-AD8-14	-248	7/8	8-32	.
-AD8-16	-249	1	8-32	.
AN501AD (Fine Thread/Stainless Steel)				
AN501 Dash No.*	MS35276 Dash No.	Length (In.)	Thread Size	Price Each
-AD10-5	-260	5/16	10-32	.
-AD10-6	-261	3/8	10-32	.
-AD10-7	-262	7/16	10-32	.
-AD10-8	-263	1/2	10-32	.
-AD10-10	-264	5/8	10-32	.
-AD10-12	-265	3/4	10-32	.
-AD10-14	-266	7/8	10-32	.
-AD10-16	-267	1	10-32	.

HA

## AN502, AN503 FILLISTER HEAD SCREWS



AN502 (fine thread) and AN503 (coarse thread) drilled head, slotted fillister head screws are fabricated from steel meeting specification MIL-S-6050. Tensile strength 125,000 PSI. Cadmium plated, Type I, Class 3.

### AN502 (FINE THREAD)

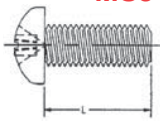
AN502 Dash No.*	Length (In.)	Thread Size	Price Each	AN502 Dash No.*	Length (In.)	Thread Size	Price Each
-10-5	5/16	10-32	.	-10-12	3/4	10-32	.
-10-6	3/8	10-32	.	-10-16	1	10-32	.
-10-8	1/2	10-32	.	-416-12	3/4	1/4-28	.
-10-10	5/8	10-32	.	-416-16	1	1/4-28	.

### AN503 (COARSE THREAD)

AN503 Dash No.*	Length (In.)	Thread Size	Price Each	AN503 Dash No.*	Length (In.)	Thread Size	Price Each
-6-4	1/4	6-32	.	-10-6	3/8	10-24	.
-6-6	3/8	6-32	.	-10-8	1/2	10-24	.
-8-4	1/4	8-32	.	-10-10	5/8	10-24	.
-8-6	3/8	8-32	.	-10-12	3/4	10-24	.
-8-8	1/2	8-32	.	-10-16	1	10-24	.
-8-10	5/8	8-32	.	-10-24	1-1/2	10-24	.
-8-16	1	8-32	.	-416-8	1/2	1/4-20	.
				-416-10	5/8	1/4-20	.
				-416-12	3/4	1/4-20	.

# ALLOY/STRUCTURAL — MACHINE SCREWS

## MS51957 / MS51958 STAINLESS MACHINE SCREWS



- Phillips Pan Head
- 300 Series Stainless Steel
- Finish - Passivate per QQ-P-35



Thread	Length	Phillips Part No.	Price Each	Thread	Length	Phillips Part No.	Price Each
2-56	.188	MS51957-2	.	6-32	.500	MS51957-30	.
	.250	MS51957-3	.		.625	MS51957-31	.
	.312	MS51957-4	.		.875	MS51957-33	.
	.375	MS51957-5	.		1.00	MS51957-34	.
	.438	MS51957-6	.		.250	MS51957-41	.
	.500	MS51957-7	.		.312	MS51957-42	.
	.625	MS51957-9	.		.375	MS51957-43	.
4-40	.750	MS51957-10	.	8-32	.500	MS51957-45	.
	.188	MS51957-12	.		.625	MS51957-46	.
	.250	MS51957-13	.		.750	MS51957-47	.
	.312	MS51957-14	.	.875	MS51957-48	.	
	.375	MS51957-15	.	1.00	MS51957-49	.	
	.438	MS51957-16	.	.312	MS51958-60	.	
	.500	MS51957-17	.	.375	MS51958-61	.	
	.625	MS51957-18	.	.438	MS51958-62	.	
	.750	MS51957-19	.	10-32	.500	MS51958-63	.
	.875	MS51957-20	.		.625	MS51958-64	.
	1.00	MS51957-21	.		.750	MS51958-65	.
6-32	.188	MS51957-25	.	.875	MS51958-66	.	
	.250	MS51957-26	.	1.00	MS51958-67	.	
	.312	MS51957-27	.	1.25	ms51958-68	.	
	.375	MS51957-28	.				
	.438	MS51957-29	.				

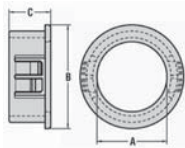
Fingertip Assembly



**SNAP BUSHINGS**  
Ideal for abrasion and cutting protection of wiring, antenna leads, tubing, cables, etc. that are routed through bulkheads, ribs and other internal aircraft structures. Made of hard black nylon. Drill a hole about 1/8" larger than bushing I.D. and insert bushing. Spring-like fingers snap out to hold it in place. Special sizes on request with 100 piece minimum. \*For .062" max. bulkhead thickness. All others for .125" max. bulkhead thickness.

Mounting Part No.	Hole Dia.	Bushing I.D.	Price Ea.	Mounting Part No.	Hole Dia.	Bushing I.D.	Price Ea.
04-05700*	.250	1/8"	.	04-05753	.500	3/8"	.
04-05710*	.312	3/16"	.	04-05775	.625	1/4"	.
04-05730	.375	1/4"	.	04-05773	.625	1/2"	.
04-05738	.437	1/4"	.	04-05790	.750	3/8"	.
04-05758	.500	1/4"	.	04-05793	.750	9/16"	.

\*For .062" max. bulkhead thickness. All others for .125" max. bulkhead thickness. Less 15% Discount on 100 pieces per size.



## SNAP BUSHINGS

Converts raw-edged holes to smooth, neat, insulated holes. Locking fingers "snap" into holes with fingertip pressure. Locking finger steps are designed at fractional increments to accommodate a range of panel thicknesses up to .250" (6.4 mm). Withstands a push back force of 35 pounds.

Panel Dimensions				P/N	UL/CSA Designation	Part Dimensions					
Maximum Thickness	Mounting Hole	Dia.				Color	A Inside Diameter	B Head Diameter	C Overall Height		
in.	mm.	in.	mm.	Black	in.	mm.	in.	mm.	in.	mm.	
.125	3,2	1.093 - 1.125	27, 8-28,6	2163	SB1093 - 14	.875	22,2	1.218	30,9	.453	11,5
.125	3,2	1.093 - 1.125	27, 8-28,6			2166	SB1093 - 15	.937	23,8	1.218	30,9

Model 2163..... P/N 04-01985  
Model 2166..... P/N 04-01986

## AN535 DRIVE SCREWS

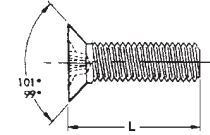


Hardened steel screws to make permanent fastenings to ferrous and non-ferrous castings, heavy gauge steel, plastics, etc. Cadmiumplated. Spec. MS21318

AN535 Dash #	MS21318 Dash #	Dia. In.	Length In.	Sugg. Drill Size	Price Each
-00-4	-3	.060	1/4	#55 (.052")	.
-0-4	-9	.075	1/4	#51 (.067")	.
-2-3	-14	.100	3/16	#44 (.086")	.
-2-4	-15	.100	1/4	#44 (.086")	.
-4-4	-21	.116	1/4	#37 (.104")	.
-00-2	-1	.060	1/8	#55 (.052")	.
-00-3	-2	.060	3/16	#55 (.052")	.
-0-2	-7	.075	1/8	#51 (.067")	.
-0-3	-8	.075	3/16	#51 (.067")	.
-2-2	-13	.100	1/8	#44 (.086")	.
-4-3	-20	.116	3/16	#37 (.104")	.
-4-5	-22	.116	5/16	#37 (.104")	.

## NAS514 MACHINE SCREWS

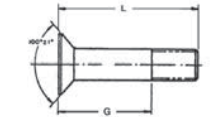
- Phillips 100° Flat Head
- Fully Threaded
- Alloy Steel (8740)
- Finish - Cadmium per QQ-P-416 Type II
- Tensile - 125,000 145,000 PSI



Thrd.	Length	Phillips Part No.	Price Ea.
4-40	.250	NAS514P440-4P	.
	.312	NAS514P440-5P	.
	.375	NAS514P440-6P	.
	.438	NAS514P440-7P	.
	.500	NAS514P440-8P	.
	.625	NAS514P440-10P	.
6-32	.750	NAS514P440-12P	.
	.188	NAS514P632-3P	.
	.250	NAS514P632-4P	.
	.312	NAS514P632-5P	.
	.375	NAS514P632-6P	.
	.438	NAS514P632-7P	.
	.500	NAS514P632-8P	.
	.625	NAS514P632-10P	.
	.750	NAS514P632-12P	.
	.875	NAS514P632-14P	.
	1.00	NAS514P632-16P	.
8-32	.250	NAS514P832-4P	.
	.312	NAS514P832-5P	.
	.375	NAS514P832-6P	.
	.438	NAS514P832-7P	.
	.500	NAS514P832-8P	.
	.625	NAS514P832-10P	.
	.750	NAS514P832-12P	.
	.875	NAS514P832-14P	.
	1.00	NAS514P832-16P	.
	1.25	NAS514P832-20P	.
	10-32	.250	NAS514P1032-4P
.312		NAS514P1032-5P	.
.375		NAS514P1032-6P	.
.438		NAS514P1032-7P	.
.500		NAS514P1032-8P	.
.625		NAS514P1032-10P	.
.750		NAS514P1032-12P	.
.875		NAS514P1032-14P	.
1.00		NAS514P1032-16P	.
1.25		NAS514P1032-20P	.

## NAS517 FLUSH HEAD SCREWS

- Phillips 100 Deg. Flat Head
- Alloy Steel Per Mil-S-6049
- Finish - Cad Plate per QQ-P-416 Type II



Thrd	Grip	Lgth	Phillips Part No.	Price Ea.
8-32	.125	.469	NAS517-2-1	.
	.188	.531	NAS517-2-2	.
	.250	.594	NAS517-2-3	.
	.312	.656	NAS517-2-4	.
	.375	.719	NAS517-2-5	.
	.438	.781	NAS517-2-6	.
	.500	.844	NAS517-2-7	.
	.562	.906	NAS517-2-8	.
	.625	.969	NAS517-2-9	.
	.688	1.031	NAS517-2-10	.
	.750	1.093	NAS517-2-11	.
10-32	.812	1.156	NAS517-2-12	.
	.875	1.219	NAS517-3-0	.
	.937	1.281	NAS517-3-1	.
	.125	.531	NAS517-3-2	.
	.188	.594	NAS517-3-3	.
	.250	.656	NAS517-3-4	.
	.312	.719	NAS517-3-5	.
	.375	.781	NAS517-3-6	.
	.438	.844	NAS517-3-7	.
	.500	.906	NAS517-3-8	.
	.562	.969	NAS517-3-9	.
.625	1.031	NAS517-3-10	.	
.688	1.093	NAS517-3-11	.	
.750	1.156	NAS517-3-12	.	
.812	1.219	NAS517-3-13	.	
.875	1.281	NAS517-3-14	.	
1.00	1.406	NAS517-3-16	.	

## SET SCREWS

Set screws are used to provide immediate, binding location of various parts on shafts. Maximum holding pressure is made by the cup point edge gripping the contact surface. Allen head wrenches are used to operate set screws.

Part No.	Thread	Length	Price	Part No.	Thread	Length	Price
04-00182	8-32	3/16	.	04-00191	1/4-28	5/16	.
04-00183	8-32	1/4	.	04-00189	10-32	1/2	.
04-00184	10-32	1/4	.	04-00191	1/4-28	5/16	.
04-00189	10-32	1/2	.				

## 10-32 X 1/4 INCH ALLEN SET SCREW

Set Screw - Socket Products Type: Socket Set Screws Point Type: Cup Thread Size: 10-32 Overall Length: 1/4 Material: Alloy Steel - Grade 8 Finish/Coating: Black Oxide. Key Size (Inch): 3/32. Metalworking Book: 2085. Big Book: 1830 P/N 04-01032.....



## SHORTY BUSHING 2820

Material: 6/6 Nylon Certifications: File E15331 File LR8919 Flammability Rating: 94V-2 Material Temperature Index: 125°C (257°F)—Max. temperature on part not to exceed 105°C (221°F) Insulating feed-thru bushings for limited internal clearance applications.

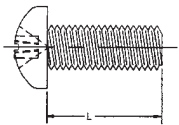
P/N 04-02026.....

# ALLOY/STRUCTURAL — MACHINE SCREWS

## NAS600 - NAS603 MACHINE SCREWS



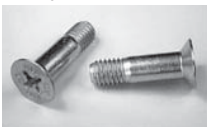
Thread	Length	Part No.	Price Ea.	
4-40	.188	NAS600-3P	.	
	.250	NAS600-4P	.	
	.312	NAS600-5P	.	
	.375	NAS600-6P	.	
	.438	NAS600-7P	.	
	.500	NAS600-8P	.	
6-32	.188	NAS601-3P	.	
	.250	NAS601-4P	.	
	.312	NAS601-5P	.	
	.375	NAS601-6P	.	
	.438	NAS601-7P	.	
	.500	NAS601-8P	.	
	.562	NAS601-9P	.	
	.625	NAS601-10P	.	
	.750	NAS601-12P	.	
	8-32	.188	NAS602-3P	.
.250		NAS602-4P	.	
.312		NAS602-5P	.	
.375		NAS602-6P	.	
.438		NAS602-7P	.	
.500		NAS602-8P	.	
.562		NAS602-9P	.	
.625		NAS602-10P	.	
.688		NAS602-11P	.	
.750		NAS602-12P	.	
.813		NAS602-13P	.	
.875		NAS602-14P	.	
1.00		NAS602-16P	.	
10-32		.250	NAS603-4P	.
		.312	NAS603-5P	.
		.375	NAS603-6P	.
	.438	NAS603-7P	.	
	.500	NAS603-8P	.	
	.562	NAS603-9P	.	
	.625	NAS603-10P	.	
	.688	NAS603-11P	.	
	.750	NAS603-12P	.	
	.813	NAS603-13P	.	
	.875	NAS603-14P	.	
	.938	NAS603-15P	.	
	1.00	NAS603-16P	.	
	1.125	NAS603-18P	.	
1.25	NAS603-20P	.		



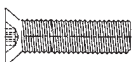
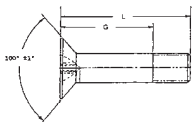
- Phillips Pan Head
- Alloy Steel (8740)
- Finish - Cadmium per QQ-P-416
- Tensile -160,000 - 180,000 PSI

## NAS1202 / NAS1203 FLUSH HEAD SCREWS

- Phillips 100° Flat Head • Tensile – 160,000 – 180,000 PSI
- Alloy Steel Per MIL-S-6049 • Finish - Cadmium per QQ-P-416, Type II



Thrd.	Grip	Lgth.	Part No.	Price Ea.
8-32	.125	.401	NAS1202-2	.
	.188	.464	NAS1202-3	.
	.250	.526	NAS1202-4	.
	.312	.588	NAS1202-5	.
	.375	.651	NAS1202-6	.
	10-32	.125	.401	NAS1203-2
.188		.464	NAS1203-3	.
.250		.526	NAS1203-4	.
.312		.588	NAS1203-5	.
.375		.651	NAS1203-6	.
.438		.714	NAS1203-7	.
.500		.776	NAS1203-8	.

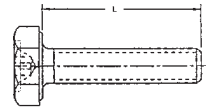


## MS51959 MACHINE SCREWS

- Phillips 82° Flat Head • Stainless Steel

Thrd.	Lgth.	Part No.	Each	Thrd.	Lgth.	Part No.	Each
2-56	.188	MS51959-2	.	6-32	.312	MS51959-27	.
	.250	MS51959-3	.		.375	MS51959-28	.
	.312	MS51959-4	.		.438	MS51959-29	.
	.375	MS51959-5	.		.500	MS51959-30	.
	.250	MS51959-13	.		.625	MS51959-31	.
4-40	.312	MS51959-14	.	8-32	.375	MS51959-43	.
	.375	MS51959-15	.		.438	MS51959-44	.
	.438	MS51959-16	.		.500	MS51959-45	.
	.500	MS51959-17	.		.625	MS51959-46	.
					.750	MS51959-47	.

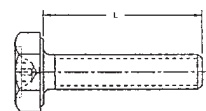
## NAS1096 HEX HEAD SCREWS



- Phillips Hex Head
- Alloy Steel per MIL-S-6049
- Finish - Cadmium per QQ-P-416 Type II
- Tensile – 125,000-145,000 PSI

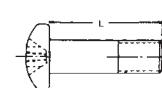
Thread	Length	Part No.	Price Ea.
6-32	.375	NAS1096-1-6	.
	.438	NAS1096-1-7	.
	.500	NAS1096-1-8	.
	.562	NAS1096-1-9	.
	.625	NAS1096-1-10	.
	.750	NAS1096-1-12	.
8-32	.312	NAS1096-2-5	.
	.375	NAS1096-2-6	.
	.438	NAS1096-2-7	.
	.500	NAS1096-2-8	.
	.562	NAS1096-2-9	.
	.625	NAS1096-2-10	.
10-32	.750	NAS1096-2-12	.
	.312	NAS1096-3-5	.
	.375	NAS1096-3-6	.
	.438	NAS1096-3-7	.
	.500	NAS1096-3-8	.
	.562	NAS1096-3-9	.
	.625	NAS1096-3-10	.
	.750	NAS1096-3-12	.
	.875	NAS1096-3-14	.
	1.00	NAS1096-3-16	.
1.25	NAS1096-3-20	.	

## NAS1801 HEX HEAD SCREWS



- Phillips Hex Head
- Alloy Steel Per MIL-S-6049
- Finish - Cad Plate per QQ-P-416, Type II
- Tensile – 160,000-185,000 PSI

Thread	Length	Part No.	Price Ea.
8-32	.250	NAS1801-08-4	.
	.312	NAS1801-08-5	.
	.375	NAS1801-08-6	.
	.438	NAS1801-08-7	.
	.500	NAS1801-08-8	.
	.562	NAS1801-08-9	.
	.625	NAS1801-08-10	.
	.750	NAS1801-08-12	.
	.875	NAS1801-08-14	.
	1.00	NAS1801-08-16	.
	1.125	NAS1801-08-18	.
	1.25	NAS1801-08-20	.
	1.375	NAS1801-08-22	.
	10-32	.312	NAS1801-3-5
.375		NAS1801-3-6	.
.438		NAS1801-3-7	.
.500		NAS1801-3-8	.
.562		NAS1801-3-9	.
.625		NAS1801-3-10	.
.750		NAS1801-3-12	.
.875		NAS1801-3-14	.
1.00		NAS1801-3-16	.
1.125		NAS1801-3-18	.
1.25	NAS1801-3-20	.	
1.375	NAS1801-3-22	.	
1.50	NAS1801-3-24	.	



## NAS623 PAN HEAD SCREWS

- Phillips Pan Head • Alloy Steel per MIL-S-6049
- Finish: Cadmium per QQ-P-416, Type II
- Tensile: 160,000-180,000 PSI

Thrd.	Lgth.	Part No.	Each	Thrd.	Lgth.	Part No.	Each
8-32	.338	NAS623-2-1	.	10-32	.588	NAS623-3-5	.
	.401	NAS623-2-2	.		.651	NAS623-3-6	.
	.464	NAS623-2-3	.		.714	NAS623-3-7	.
	.526	NAS623-2-4	.		.776	NAS623-3-8	.
	.588	NAS623-2-5	.		.838	NAS623-3-9	.
	.651	NAS623-2-6	.		.901	NAS623-3-10	.
	.714	NAS623-2-7	.		.964	NAS623-3-11	.
	.776	NAS623-2-8	.		1.026	NAS623-3-12	.
	.838	NAS623-2-9	.		1.088	NAS623-3-13	.
	.901	NAS623-2-10	.		1.151	NAS623-3-14	.
10-32	.964	NAS623-2-11	.	1.214	NAS623-3-15	.	
	1.026	NAS623-2-12	.	1.276	NAS623-3-16	.	
	.401	NAS623-3-2	.	1.338	NAS623-3-17	.	
	.464	NAS623-3-3	.	1.401	NAS623-3-18	.	
	.526	NAS623-3-4	.				

HA

# SHEET METAL SCREWS

## TRUSS HEAD TYPE A STAINLESS

Size	Length	Phillips		Slotted	
		Part No.	Price Each	Part No.	Price Each
4	1/4	T4X4	.	TS4X4	.
	3/8	T4X6	.	TS4X6	.
	1/2	T4X8	.	TS4X8	.
6	1/4	T6X4	.	TS6X4	.
	3/8	T6X6	.	TS6X6	.
	1/2	T6X8	.	TS6X8	.
	5/8	T6X10	.	TS6X10	.
	3/4	T6X12	.	TS6X12	.
	1	T6X16	.	TS6X16	.
8	3/8	T8X6	.	TS8X6	---
	1/2	T8X8	.	TS8X8	.
	5/8	T8X10	.	TS8X10	.
	3/4	T8X12	.	TS8X12	.
	1	T8X16	.	TS8X16	.
	1-1/4	T8X20	.	TS8X20	.
10	3/8	T10X6	.	TS10X6	.
	1/2	T10X8	.	TS10X8	.
	5/8	T10X10	.	TS10X10	.
	3/4	T10X12	.	TS10X12	.
	1	T10X16	.	TS10X16	.
1-1/4	T10X20	.	TS10X20	.	

HA

## TRUSS HEAD TYPE B PHILLIPS STAINLESS

Size	Length	P/N	Price	Size	Length	P/N	Price
4	1/4	04-00164	.	8	3/8	04-00174	.
	3/8	04-00166	.		1/2	T8X8B	.
	1/2	04-00167	.		5/8	04-00007	.
6	1/4	04-00168	.	10	3/4	04-00176	.
	3/8	04-00169	.		1	04-00177	.
	1/2	T6X8B	.		3/8	04-00178	.
	5/8	04-00171	.		1/2	T10X8B	.
	3/4	04-00172	.		5/8	04-00008	.
	1	04-00173	.		3/4	04-00179	.
				1	04-00181	.	

## 82° OVAL HEAD TYPE A, PHILLIPS (FOR UPHOLSTERY)

Size	Length	Stainless P/N	Price Ea	Zinc P/N	Price Ea
4	1/4	O4X4	.	O4X4Z	---
	3/8	O4x6	.	O4X6Z	.
	1/2	O4X8	.	O4X8Z	.
6	5/8	O4X10	.	O4X10Z	.
	3/8	O6X6	.	O6X6Z	.
	1/2	O6X8	.	O6X8Z	.
	5/8	O6X10	.	O6X10Z	.
	3/4	O6X12	.	O6X12Z	.
	1	O6X16	.	O6X16Z	---
8	3/8	O8X6	.	O8X6Z	.
	1/2	O8X8	.	O8X8Z	.
	5/8	O8X10	.	O8X10Z	.
	3/4	O8X12	.	O8X12Z	.
	1	O8X16	.	O8X16Z	.
	10	1/2	O10X8	.	O10X8Z
3/4		O10X12	.	O10X12Z	.

## 100° FLAT HEAD TYPE A, PHILLIPS, STAINLESS

Size	Length	Part No.	Price Ea.
6	1/2	C6X8	.
8	1/2	C8X8	.
10	1/2	C10X8	.

## AN530 ROUND HEAD Use slot- ted type for antiques.



Size	SLOTTED		PHILLIPS	
	Price	P/N AN530 Dash#	Price	P/N AN530 Dash#
4X1/4	---	---	.	4R4
4X3/8	---	-4-6	---	N/A
4X1/2	---	---	.	4R8
6X3/8	---	-6-6	.	6R6
6X1/2	---	-6-8	.	6R8
6X5/8	---	---	.	6R10
6X3/4	---	-6-12	.	6R12
8X3/8	---	---	.	8R6
8X1/2	---	---	.	8R8
10X1/2	---	10-8	.	10R8
10X1	---	---	.	10R16

## ZINC-PLATED, TRUSS HEAD TYPE A & TYPE B

Size	Length	Phillips			Slotted	
		Part No. Type A	Part No. Type B	Price Each	Part No. Type A	Price Each
4	1/4	THA4X4	THB4X4	.	THA4-4	---
4	3/8	THA4X6	THB4X6	.	THA4-6	.
4	1/2	THA4X8	THB4X8	.	THA4-8	.
4	5/8	THA4X10	THB4X10	.	THA4-10	.
4	3/4	THA4X12	THB4X12	.	THA4-12	.
4	7/8	THA4X14	-----	----	-----	----
6	3/8	THA6X6	THB6X6	.	THA6-6	.
6	1/2	THA6X8	THB6X8	.	THA6-8	.
6	5/8	THA6X10	THB6X10	.	THA6-10	.
6	3/4	THA6X12	THB6X12	.	THA6-12	.
8	3/8	THA8X6	THB8X6	.	THA8-6	.
8	1/2	THA8X8	THB8X8	.	THA8-8	.
8	5/8	THA8X10	THB8X10	.	THA8-10	---
8	3/4	THA8X12	THB8X12	.	THA8-12	---
8	1	THA8X16	THB8X16	.	THA8-16	.
10	1/2	THA10X8	THB10X8	.	THA10-8	.
10	5/8	THA10X10	THB10X10	.	THA10-10	---
10	3/4	THA10X12	THB10X12	.	THA10-12	.
10	1	THA10X16	THB10X16	.	THA10-16	.

## ZINC-PLATED, 82° FLAT HEAD TYPE A ZINC-PLATED STEEL (Use slotted screws for antiques)

Size	Length	Phillips			Slotted	
		Part No. Type A	Part No. Type B	Price Each	Part No. Type A	Price Each
4	1/4	FHA4X4	FHB4X4	.	FHA4-4	---
4	3/8	FHA4X6	FHB4X6	.	FHA4-6	---
4	1/2	FHA4X8	FHB4X8	.	FHA4-8	---
4	5/8	FHA4X10	FHB4X10	---	FHA4-10	---
4	3/4	FHA4X12	FHB4X12	---	FHA4-12	---
6	3/8	FHA6X6	FHB6X6	.	FHA6-6	.
6	1/2	FHA6X8	FHB6X8	.	FHA6-8	---
6	5/8	FHA6X10	FHB6X10	.	FHA6-10	.
6	3/4	FHA6X12	FHB6X12	.	FHA6-12	---
8	3/8	FHA8X6	FHB8X6	.	FHA8-6	---
8	1/2	FHA8X8	FHB8X8	.	FHA8-8	.
8	5/8	FHA8X10	FHB8X10	.	FHA8-10	.
8	3/4	FHA8X12	FHB8X12	.	FHA8-12	---
8	1	FHA8X16	FHB8X16	.	FHA8-16	.
10	1/2	FHA10X8	FHB10X8	.	FHA10-8	.
10	5/8	FHA10X10	FHB10X10	.	FHA10-10	.
10	3/4	FHA10X12	FHB10X12	---	THA10-12	.

## 100° FLAT HEAD TYPE B, PHILLIPS, STAINLESS

Size	Length	Part No.	Price Ea
6	1/2	MS21207-C6-8	.
8	1/2	MS21207-C8-8	.
8	5/8	MS21207-C8-10	.
10	1/2	MS21207-C10-8	.

## FUEL TANK STRUCTURAL STAINLESS SCREW KITS (PER TANK)

Aircraft Model	Part No.	Price
Cessna 150/152 (Standard)	04-01005	.
Cessna 150/152 (Long Range)	04-01004	.
Cessna 172	04-01003	.
Piper PA28 Cherokee (Standard)	04-01002	.
Piper PA28 Cherokee (Long Range)	04-01001	.
Cessna 150 Aerobat	04-01006	.
Cessna 150/152 (67-77)	04-01008	.
Cessna 170AF	04-01009	.
Cessna 182F	04-01011	.
Piper Cherokee 140/150/160/180/235 (Cad. Plated)	04-01015	.

# MACHINE SCREWS

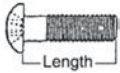
## BRASS INSTRUMENT SCREWS

Use brass screws for all panel installations to eliminate magnetic interference. All brass screws are coated in black oxide.

### AN515 & AN520 ROUND HEAD SCREWS

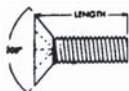


Part Number	Length (In.)	Thread Size	Price Each
AN515B6R8 (Recessed)	1/2	6-32	.
AN515B6-12 (Slot)	3/4	6-32	.
AN515B6R12 (Recessed)	3/4	6-32	.
AN515B8-16 (Slot)	1	8-32	.
AN515B10-16 (Slot)	1	10-24	.



### MS35214 & MS35215 PAN HEAD SCREWS

Part No.	Length	Thread	Price	Part No.	Length	Thread	Price
MS35214-12	1/4"	4-40	.	MS35214-40	3/8"	8-32	.
MS35214-13	5/16"	4-40	.	MS35214-41	7/16"	8-32	.
MS35214-14	3/8"	4-40	.	MS35214-42	1/2"	8-32	.
MS35214-15	7/16"	4-40	.	MS35214-43	5/8"	8-32	.
MS35214-16	1/2"	4-40	.	MS35214-44	3/4"	8-32	.
MS35214-18	3/4"	4-40	.	MS35214-45	7/8"	8-32	.
MS35214-23	1/4"	6-32	.	MS35214-46	1"	8-32	.
MS35214-24	5/16"	6-32	.	MS35214-47	1-1/4"	8-32	.
MS35214-26	7/16"	6-32	.	MS35214-48	1-1/2"	8-32	.
MS35214-27	1/2"	6-32	.	MS35214-59	1"	10-24	.
MS35214-28	5/8"	6-32	.	MS35215-53	3/8"	10-32	.
MS35214-29	3/4"	6-32	.	MS35215-55	1/2"	10-32	.
MS35214-30	7/8"	6-32	.	MS35215-56	5/8"	10-32	.
MS35214-31	1"	6-32	.	MS35215-57	3/4"	10-32	.
MS35214-32	1-1/4"	6-32	.	MS35215-59	1"	10-32	.
MS35214-33	1-1/2"	6-32	.	MS35215-60	1-1/4"	10-32	.



### MS24693 FLAT HEAD SCREWS (RECESSED)

Part Number	Length	Thread	Price	Part Number	Length	Thread	Price
MS24693BB2	.250	4-40	.	MS24693BB32	1.00	6-32	.
MS24693BB3	.312	4-40	.	MS24693BB33	1.13	6-32	.
MS24693BB4	.375	4-40	.	MS24693BB34	1.25	6-32	.
MS24693BB5	.438	4-40	.	MS24693BB36	1.50	6-32	.
MS24693BB6	.500	4-40	.	MS24693BB48	.375	8-32	.
MS24693BB7	.625	4-40	.	MS24693BB50	.500	8-32	.
MS24693BB24	.250	6-32	.	MS24693BB51	.625	8-32	.
MS24693BB25	.312	6-32	.	MS24693BB54	1	8-32	.
MS24693BB26	.375	6-32	.	MS24693BB56	1.25	8-32	.
MS24693BB27	.438	6-32	.	MS24693BB272	.500	10-32	.
MS24693BB28	.500	6-32	.	MS24693BB273	.625	10-32	.
MS24693BB29	.625	6-32	.	MS24693BB274	.750	10-32	.
MS24693BB30	.750	6-32	.	MS24693BB276	1.00	10-32	.
MS24693BB31	.875	6-32	.	MS24693BB278	1.25	10-32	.

## STAINLESS STEEL SCREW, WASHER & STOP NUT ASSORTMENT

This 2400 piece assortment is ideal for aircraft homebuilders, owners, mechanics and FBO's. It is packaged in a handy divided storage kit and contains 2100 stainless steel screws and washers and 300 stop nuts. Kit contains 100 each of the following:

### NON-STRUCTURAL MACHINE SCREWS

Countersunk Flat Head	Truss Head
AN507C632R8	AN526C632R8
AN507C832R8	AN526C832R8
AN507C832R10	AN526C832R10
AN507C1032R8	AN526C1032R8
AN507C1032R10	AN526C1032R10

### ELASTIC STOP NUTS

AN365C632
AN365C832
AN365C1032

### WASHERS

Tinnerman Countersunk	
A3135-SS-017	(#8)
A3235-SS-020	(#10)
Flat: AN960C6	
AN960C8 or AN960C10	

### SHEET METAL SCREWS

Truss Head Phillips, Type A (Sharp Point)	
4R x 1/2	8R x 1/2
6R x 3/8	8R x 5/8
6R x 1/2	10R x 1/2

### STAINLESS STEEL HARDWARE ASSORTMENT

P/N 04-05000 .....

## INDIVIDUAL AIRPLANE EXTERIOR STAINLESS TRIM SCREW AND WASHER KITS

These kits do not include any structural screws.

Aircraft Type	# of Pieces	P/N	Price
<b>BEECHCRAFT</b>			
Baron	1310	04-04400	.
Bonanza	675	04-04300	.
Musketeer/Sport	615	04-04350	.
Sundowner	615	04-04350	.
<b>BELLANCA</b>			
Citabria	248	04-00990	.
Viking	-	04-00880	.
<b>CESSNA</b>			
120/140	310	04-01200	.
150/152	355	04-01000	.
170	310	04-01200	.
170-B	310	04-01200	.
172/172 Skyhawk	410	04-01100	.
172RG	330	04-01400	.
172 XP	520	04-01300	.
175	450	04-01500	.
177/177RG Cardinal	600	04-01600	.
180/185 Skywagon	530	04-01700	.
182/182RG Skylane	580	04-01900	.
188 Agwagon	775	04-02000	.
190/195	370	04-02100	.
205	510	04-02200	.
206-208 Stationair	555	04-02300	.
210 Centurion	630	04-02400	.
310 (before 1963)	1110	04-02410	.
310 (1963 & up)	-	04-02500	.
335/340	1492	04-02510	.
336/337	1347	04-02700	.
337 Super Skymaster	-	04-02710	.
401/402	1468	04-00401	.
411/414/421	1342	04-02750	.
421	1580	04-02800	.
COMMANDER - Lark/Darter	-	04-04510	.
ERCOUPE - 415C/Forney	525	04-04900	.
<b>GRUMMAN</b>			
AA1A/AA1B	490	04-04600	.
Ag Cat	515	04-04800	.
Cheetah/Tiger	975	04-04700	.
LAKE - Amphibian	265	04-04710	.
<b>PIPER</b>			
Aerostar	-	04-04720	.
Apache	-	04-04730	.
Arrow	615	04-03800	.
Arrow III	590	04-03810	.
Aztec	1050	04-03200	.
Cherokee	570	04-03600	.
140/150/160/180/235			
Cherokee Six	455	04-04000	.
Comanche (Single)	485	04-03300	.
Comanche (Twin)	800	04-03900	.
J-3 Cub	-	04-03910	.
Navajo	2065	04-03920	.
Pawnee	1965	04-03400	.
PA28 Arrow (Fat Wing)	615	04-03800	.
PA28 Challenger/Archer	670	04-03500	.
PA28R Arrow (Tap. Wing)	590	04-03810	.
PA32R Lance	685	04-04010	.
Seneca I & II	1415	04-04100	.
Super Cub	-	04-04110	.
Tomahawk	440	04-04200	.
Tri-pacer/Colt	360	04-03100	.
Warrior/Archer	480	04-03700	.
PITTS - S2A	640	04-03710	.
ROCKWELL - 12/114	570	04-03720	.
<b>MOONEY</b>			
68, 77, 78	1240	04-02900	.
201/231	970	04-03050	.
M20C	1022	04-02820	.
M20-C 69, 76	-	04-03000	.
M20E/G (up to 1976)	-	04-02830	.
M20E/G (1977 & up)	-	04-02840	.
M20F	-	04-02850	.

HA

# SOCKET HEAD CAP SCREWS

## SOCKET HEAD CAP SCREW STAINLESS STEEL-DRILLED



### COARSE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352C04H4		4-40	1/4"	.
NAS1352C04H6		4-40	3/8"	.
NAS1352C06H6	MS24674-2	6-32	3/8"	.
NAS1352C06H8	MS24674-3	6-32	1/2"	.
NAS1352C08H6	MS24674-7	8-32	3/8"	.
NAS1352C08H8	MS24674-8	8-32	1/2"	.
NAS1352C08H10	MS24674-9	8-32	5/8"	.

### FINE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1351C3H6	MS24673-1	10-32	3/8"	.
NAS1351C3H8	MS24673-2	10-32	1/2"	.
NAS1351C3H10	MS24673-3	10-32	5/8"	.
NAS1351C4H10	MS24673-10	1/4"-28	5/8"	.
NAS1351C4H12	MS24673-11	1/4"-28	3/4"	.
NAS1351C4H14	MS24673-12	1/4"-28	7/8"	.
NAS1351C4H16	MS24673-13	1/4"-28	1"	.

## SOCKET HEAD CAP SCREW STAINLESS STEEL-UNDRILLED



### COARSE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352C04-4	MS16995-9	4-40	1/4"	.
NAS1352C04-8	MS16995-11	4-40	1/2"	.
NAS1352C06-4	MS16995-16	6-32	1/4"	.
NAS1352C06-6	MS16995-17	6-32	3/8"	.
NAS1352C06-8	MS16995-18	6-32	1/2"	.
NAS1352C06-10	MS16995-19	6-32	5/8"	.
NAS1352C08-6	MS16995-25	8-32	3/8"	.
NAS1352C08-8	MS16995-26	8-32	1/2"	.
NAS1352C08-10	MS16995-27	8-32	5/8"	.
NAS1352C08-12	MS16995-28	8-32	3/4"	.

### FINE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1351C3-6	MS16996-9	10-32	3/8"	.
NAS1351C3-8	MS16996-10	10-32	1/2"	.
NAS1351C3-10	MS16996-11	10-32	5/8"	.
NAS1351C3-12	MS16996-12	10-32	3/4"	.
NAS1351C4-10	MS16996-22	1/4-28	5/8"	.
NAS1351C4-12	MS16996-23	1/4-28	3/4"	.
NAS1351C4-16	MS16996-24	1/4-28	1"	.

## SOCKET HEAD CAP SCREW ALLOY STEEL-DRILLED



### COARSE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352-04H4P	MS24677-1	4-40	1/4"	.
NAS1352-04H6P	MS24677-2	4-40	3/8"	.
NAS1352-06H6P	MS24677-7	6-32	3/8"	.
NAS1352-06H8P	MS24677-8	6-32	1/2"	.
NAS1352-06H10P	MS24677-9	6-32	5/8"	.
NAS1352-08H6P	MS24677-14	8-32	3/8"	.
NAS1352-08H8P	MS24677-15	8-32	1/2"	.
NAS1352-08H10P	MS24677-16	8-32	5/8"	.
NAS1352-08H12P	MS24677-17	8-32	3/4"	.

### FINE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1351-3H6P	MS24678-9	10-32	3/8"	.
NAS1351-3H8P	MS24678-10	10-32	1/2"	.
NAS1351-3H10P	MS24678-11	10-32	5/8"	.
NAS1351-3H12P	MS24678-12	10-32	3/4"	.
NAS1351-4H10P	MS24678-21	1/4-28	5/8"	.
NAS1351-4H12P	MS24678-22	1/4-28	3/4"	.
NAS1351-4H14P	MS24678-23	1/4-28	4/8"	.
NAS1351-4H16P	MS24678-24	1/4-28	1"	.

## SOCKET HEAD CAP SCREW ALLOY STEEL-DRILLED



### COARSE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1352-04-4P	MS16997-9	4-40	1/4"	.
NAS1352-04-6P	MS16997-10	4-40	3/8"	.
NAS1352-04-8P	MS16997-11	4-40	1/2"	.
NAS1352-06-6P	MS16997-19	6-32	3/8"	.
NAS1352-06-8P	MS16997-20	6-32	1/2"	.
NAS1352-06-10P	MS16997-21	6-32	5/8"	.
NAS1352-08-6P	MS16997-31	8-32	3/8"	.
NAS1352-08-8P	MS16997-32	8-32	1/2"	.
NAS1352-08-10P	MS16997-33	8-32	5/8"	.
NAS1352-08-12P	MS16997-34	8-32	3/4"	.

### FINE THREADED

PART NO.	MS NO.	THREAD	LENGTH	PRICE
NAS1351-3-6P	MS16998-26	10-32	3/8"	.
NAS1351-3-8P	MS16998-27	10-32	1/2"	.
NAS1351-3-10P	MS16998-28	10-32	5/8"	.
NAS1351-3-12P	MS16998-29	10-32	3/4"	.
NAS1351-4-10P	MS16998-42	1/4-28	5/8"	.
NAS1351-4-12P	MS16998-43	1/4-28	3/4"	.
NAS1351-4-14P	MS16998-44	1/4-28	7/8"	.
NAS1351-4-16P	MS16998-45	1/4-28	1"	.

HA

# WASHERS

**MS35338 LOCK WASHERS**  
MS35338 split, helical lock washers are made of carbon steel, cadmium plated per QQ-P-416A, Type II, Class 3. They replace AN935 medium-weight washers. Formerly AN935.

Size	Cad. Plated		Stainless	
	Part No.	Price	Part No.	Price
6	MS35338-41		MS35338-136	
8	MS35338-42		MS35338-137	
10	MS35338-43		MS35338-138	
1/4	MS35338-44		MS35338-139	
5/16	MS35338-45		MS35338-140	
3/8	MS35338-46		MS35338-141	
7/16	MS35338-47		MS35338-142	
1/2	MS35338-48		MS35338-143	

## MS35333 & MS35335 LOCK WASHERS

Provide efficient locking action by spring tension and biting action of tapered twisted teeth. Made of 1050 spring steel and cadmium plated per specification QQ-P-416A, Type II, Class 3. Available with internal teeth (Type A) or external teeth (Type B).

Size	Type B External Teeth		Type A Internal Teeth	
	Cad. Plated Part No.	Price Each	Stainless Part No.	Price Each
6	MS35333-37		MS35333-71	
8	MS35333-38		MS35333-72	
10	MS35333-39		MS35333-73	
1/4	MS35333-40		MS35333-74	
5/16	MS35333-41		MS35333-75	
3/8	MS35333-42		MS35333-76	
7/16	MS35333-43		MS35333-77	
1/2	MS35333-44		MS35333-78	

## TOOTH LOCKWASHER

MIL-SPEC designations for tooth lockwashers include, but are not limited to MS35335. These are covered by military procurement specification FF-W-100

Nominal Screw Size	Inside Diameter		Outside Diameter		Material Thickness		MS 35335 Steel Plated	P/N	Price
	Min	Max	Min	Max	Min	Max			
9/16	0.576	0.596	0.960	0.985	0.037	0.045	-38	04-00099	\$0.28
3/4	0.768	0.795	1.220	1.260	0.047	0.055	-40	04-00101	\$0.76
7/8	0.897	0.927	1.380	1.410	0.052	0.060	-41	04-00103	\$0.56

## NAS549 PHENOLIC WASHERS

NAS549-10 Phenolic insulating washers for #10 screws. Size: 13/64" I.D. x 7/16" O.D. x 1/16 thick. Ea.

## G-8 TINNERMAN WASHERS

A No. 8 "Tinnerman" style washer with the same O.D. as a No. 10 (0.75). Great for those oversize holes in fairings. Unlike the No. 10 washer with a No. 8 screw, these washers will tighten down on the fairing (not bottom out on the cone) thus providing the proper "clamp up" between the fastener and the fairing. The G-8 washers are made in the USA from 304 (1/2 hard) Stainless Steel and are machine tumbled for a shiny finish.

P/N 04-01989

## TINNERMAN COUNTERSUNK WASHERS

For use with 100° flat-head screws such as MS24693 and MS24694 machine screws and NAS548 sheet metal screws to provide reinforced, low-profile attachments. Made of spring steel, cadmium plated.

Part No.	Screw Size	I.D. In.	O.D. In.	Price Each	Price per 100
A3236-012-24A	#6	.140	.50		
A3135-017-24A	#8	.171	.56		
A3235-028-24A	#10	.196	.75		
A3475-028-24A	1/4	.255	.81		

This washer is raised above fabric surface and screw fits down into washer.

## 82° CSK STAINLESS FINISHING WASHERS

Desc.	Part No.	Price	Desc.	Part No.	Price
WF-4	04-00393		WF-8	04-00395	
WF-6	04-00394		WF-10	04-00396	

## NYLON WASHERS

Part No.	Thread Size	Price Ea.	Part No.	Thread Size	Price Ea.
04-00219	#4		04-00217	#8	
04-00216	#6		04-00218	#10	

Less 20% Discount on 100 per size

## 100° CSK STAINLESS WASHERS

Size	Dimensions	Part No.	Price
6	.500 OD x .012 T	04-00397	
8	.562 OD x .017 T	04-00392	
10	.750 OD x .020 T	04-00398	

Less 20% Discount on 100 per size

## AN975 TAPER PIN WASHERS

Taper pin washers are used with AN386 threaded taper pins. Manufactured of steel, cadmium plated per QQ-P-416, Type II, Class 2.

AN975 Dash #	Fits Taper Pin #	Price Ea.
-3	1, 2	
-4	3	
-5	4	
-6	5	

## AN960 FLAT WASHERS

AN960 flat washers are used under hex nuts to provide a smooth bearing surface, as shims to obtain the correct grip length for a bolt and nut assembly, and to adjust the position of AN310 and AN320 castle nuts with respect to drilled cotter pin holes in bolts and clevis pins. Available in cadmium plated steel or anodized aluminum, and in regular and light thickness. Add the letter "L" to dash number to indicate light series. For anodized aluminum washers, add the letters "PD" after AN number.

Examples: AN960-416L is a light series cadmium plated steel washer for 1/4" dia. bolt. AN960PD-10 is an anodized aluminum washer for a 3/16" dia. bolt. AN960PD-10L is a light series anodized aluminum washer for a 3/16" dia. bolt.

**NSWC FLAT WASHER KIT** - Contains: • Flat AN960-916 (12 qty) • Flat AN960-616L (4 qty) • Flat AN960-416 (40 qty) • Flat AN960-716L (8 qty) • Flat AN960-616 (40 qty) • Flat AN960-816 (32 qty) • Flat AN960-816L (32 qty) ..... P/N 04-01728

Dash #	Bolt or Screw Size	O.D. (In.)	I.D. (In.)	Thickness		Price	
				Light	Regular	Steel each	Alum. each
-4	No. 4	.312	.125	.016	.032		
-6	No. 6	.375	.149	.016	.032		
-8	No. 8	.375	.174	.016	.032		
-10	No. 10	.438	.203	.032	.063		
-416	1/4"	.500	.265	.032	.063		
-516	5/16"	.562	.328	.032	.063		
-616	3/8"	.625	.390	.032	.063		
-716	7/16"	.750	.453	.032	.063		
-816	1/2"	.875	.515	.032	.063		
-916	9/16"	1.062	.578	.032	.063		
-1016	5/8"	1.118	.640	.032	.063		
-1216	3/4"	1.312	.765	.032	.090		

## AN960C STAINLESS WASHERS

Size	Regular		Light	
	Part No.	Price Ea.	Part No.	Price Ea.
4	AN960C4		AN960C4L	
5	----	---	----	---
6	AN960C6		AN960C6L	
8	AN960C8		AN960C8L	
3/16	AN960C10		AN960C10L	
1/4	AN960C416		AN960C416L	
5/16	AN960C516		AN960C516L	
3/8	AN960C616		AN960C616L	
7/16	AN960C716		AN960C716L	
1/2	AN960C816		AN960C816L	
9/16	AN960C916		AN960C916L	
5/8	AN960C1016		AN960C1016L	
3/4	AN960C1216		----	----

## AN970 FLAT WASHERS

Manufactured of carbon steel, cadmium plated per QQ-P-416C, Type II, Class 2. They provide a greater bearing area than AN960 washers. Used on wooden structures under both the head of the bolt & the nut to prevent crushing the surface.

Dash No.	Bolt Size	O.D. (In.)	I.D. (In.)	Thk (In.)	Price Each	Price per 100
-3	3/16"	.875	.203	.063		
-4	1/4"	1.125	.265	.063		
-5	5/16"	1.375	.328	.063		
-6	3/8"	1.625	.390	.063		
-7	7/16"	1.812	.453	.109		
-8	1/2"	2.000	.515	.109		
-10	5/8"	2.375	.640	.125		

## FINISHING WASHERS

Finishing washers are used in non-structural interior and upholstery applications. The parts covered by NAS390 & NAS391 are getting harder to procure and do not necessarily conform exactly to all of the dimensions stated on the specs. Commercial equivalents can be supplied and are suggested. These are non-critical washers that are readily available and cost effective.

Screw or Bolt Size	Countersink Washer Part No.	Price		Flush Washer Part No.	Price	
		Each	100		Each	100
#4	NAS391B4P			NAS390B4P	--	--
#6	NAS391B6P			NAS390B6P		
#8	NAS391B8P			NAS390B8P		
#10	NAS391B10P			NAS390B10P		

HA

# CLEVIS PINS - COTTER PINS



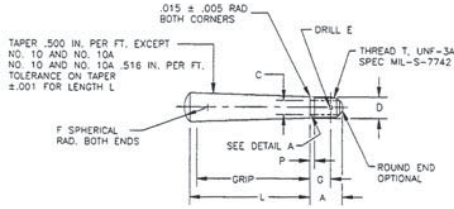
## MS24665 COTTER PINS (FORMERLY AN380)

MS24665 cotter pins are stocked in cadmium plated steel (formerly AN380) and in passivated corrosion resisting steel (formerly AN381) in the priced sizes listed below. Other sizes available on special order. Write for quotation. Assortment of 100 Cadmium Plated Cotter Pins  
P/N 04-05050 .....

CADMIUM PLATED				CORROSION RESISTANT STEEL			
Part No.	AN381 Dash No.	Dia. & Length	Price	Part No.	AN381 Dash No.	Dia. & Length	Price
MS24665-5	-1-2	1/32 X 1/2	.	MS24665-22	-1-8	1/32 X 1/2	.
MS24665-7	-1-3	1/32 X 3/4	.	MS24665-24	-1-12	1/32 X 3/4	.
MS24665-9	-1-4	1/32 X 1	.	MS24665-26	-1-16	1/32 X 1	.
MS24665-132	-2-2	1/16 X 1/2	.	MS24665-151	-2-8	1/16 X 1/2	.
MS24665-134	-2-3	1/16 X 3/4	.	MS24665-153	-2-12	1/16 X 3/4	.
MS24665-136	-2-4	1/16 X 1	.	MS24665-155	-2-16	1/16 X 1	.
MS24665-138	-2-5	1/16 X 1-1/4	.	MS24665-157	-2-20	1/16 X 1-1/4	.
MS24665-140	-2-6	1/16 X 1-1/2	.	MS24665-159	-2-24	1/16 X 1-1/2	.
MS24665-142	-2-7	1/16 X 1-3/4	.	MS24665-161	-2-28	1/16 X 1-3/4	.
MS24665-143	-2-8	1/16 X 2	.	MS24665-162	-2-32	1/16 X 2	.
MS24665-208	-	5/64 X 1/2	.	MS24665-227	-25-8	5/64 X 1/2	.
MS24665-281	-3-2	3/32 X 1/2	.	MS24665-229	-25-12	5/64 X 3/4	.
MS24665-283	-3-3	3/32 X 3/4	.	MS24665-298	-3-8	3/32 X 1/2	.
MS24665-285	-3-4	3/32 X 1	.	MS24665-300	-3-12	3/32 X 3/4	.
MS24665-287	-3-5	3/32 X 1-1/4	.	MS24665-302	-3-16	3/32 X 1	.
MS24665-289	-3-6	3/32 X 1-1/2	.	MS24665-304	-3-20	3/32 X 1-1/4	.
MS24665-292	-3-8	3/32 X 2	.	MS24665-306	-3-24	3/32 X 1-1/2	.
MS24665-349	-4-2	1/8 X 1/2	.	MS24665-309	-3-32	3/32 X 2	.
MS24665-351	-4-3	1/8 X 3/4	.	MS24665-366	-4-8	1/8 X 1/2	.
MS24665-353	-4-4	1/8 X 1	.	MS24665-368	-4-12	1/8 X 3/4	.
MS24665-355	-4-5	1/8 X 1-1/4	.	MS24665-370	-4-16	1/8 X 1	.
MS24665-357	-4-6	1/8 X 1-1/2	.	MS24665-372	-4-20	1/8 X 1-1/4	.
MS24665-359	-4-7	1/8 X 1-3/4	.	MS24665-374	-4-24	1/8 X 1-1/2	.
MS24665-360	-4-8	1/8 X 2	.	MS24665-377	-4-32	1/8 X 2	.
MS24665-362	-4-10	1/8 X 2-1/2	.	MS24665-379	-4-40	1/8 X 2-1/2	.
MS24665-426	-5-9	5/32 X 2	.	MS24665-444	-5-32	5/32 X 2	.
MS24665-498	-6-8	3/16 X 2	.	MS24665-516	-6-32	3/16 X 2	.
MS24665-500	-6-10	3/16 X 2 1/2	.	MS24665-518	-6-40	3/16 X 2 1/2	.

Discount: 25% for quantities of 100 or more of the same Part No.

## AN386 TAPER PINS



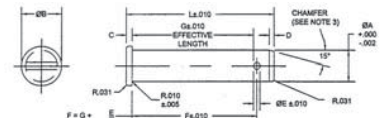
Manufactured from alloy steel, minimum tensile strength 125,000 PSI. Cadmium plated per spec. QQ-P-416, Type I, Class 3. Taper: 0.500"/ft. Use with AN975 taper pin washer, AN320 shear castle nut and cotter pin or with AN364 elastic stop nut. When installed, the small end of the tapered shank should protrude no more than 1/16" above the surface of the assembly. The first dash number is the Brown & Sharpe taper pin reamer number and the second dash number is the grip length in eighths of an inch. For undrilled threaded shank add the letter "A" after second dash number.

First Dash No.	1	2	3	4	5	6	7	8	9	10	10A
Thread T	10-32	10-32	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	7/8-14
A	7/16	7/16	29/64	33/64	35/64	35/64	19/32	21/32	47/64	51/64	51/64
C±.005	.141	.141	.196	.250	.313	.360	.422	.482	.660	.773	.773
D±.002	.205	.255	.317	.355	.455	.505	.605	.755	.905	1.050	1.153
E ±.010, -.000	No.50 (.070)	No.50 (.070)	No.48 (.076)	No.48 (.076)	No.36 (.106)	No.36 (.106)	No.36 (.106)	No.28 (.141)	No.28 (.141)	No.28 (.141)	No.28 (.141)
F	1/2	1/2	1/2	1/2	3/4	3/4	1	1	1	1-1/4	1-1/4
G	5/16	5/16	21/64	21/64	23/64	23/64	13/62	15/32	35/64	39/64	39/64
P	3/64	3/64	3/64	1/16	1/16	1/16	1/16	5/64	3/32	3/32	3/32

AN386-1-6	AN386-2-9A
AN386-1-6A	AN386-2-10
AN386-1-7	AN386-2-12
AN386-1-7A	AN386-2-13
AN386-1-8	AN386-2-14
AN386-1-9	AN386-3-12
AN386-1-9A	AN386-3-12A
AN386-1-10A	AN386-3-14
AN386-1-11	AN386-4-13
AN386-2-8	



## CLEVIS PINS



Made of alloy steel per specification MIL-P-5673 and cadmium plated per QQ-P-416, Type II, Class 3. Provided with drilled hole for cotter pin. Used with clevis forks and in secondary controls which are not subjected to continuous operation. Order by AN number and dash number. Example: AN395-41 is a 5/16" dia. pin with an effective length of 1-9/32". Equivalent MS number is MS20392-4C41. **Less 20% in lots of 25 per size. Request quotation on unlisted sizes. NOTE: Clevis pin prices fluctuate with changes in cost/availability at suppliers.**

Dash No.	Effective Length (In.)	AN392 MS20392 -1C 1/8"	AN393 MS20392 -2C 3/16"	AN394 MS20392 -3C 1/4"	AN395 MS20392 -4C 5/16"	AN396 MS20392 -5C 3/8"
-7	7/32					
-9	9/32					
-11	11/32					
-13	13/32					
-15	15/32					
-17	17/32					
-19	19/32					
-21	21/32					
-23	23/32					
-25	25/32					
-27	27/32					
-29	29/32					
-31	31/32					
-33	1-1/32					
-35	1-3/32					
-37	1-5/32					
-39	1-7/32					
-41	1-9/32					
-43	1-11/32					
-45	1-13/32					
-47	1-15/32					
-49	1-17/32					
-51	1-19/32					
-53	1-21/32					
-55	1-23/32					
-57	1-25/32					
-59	1-27/32					
-61	1-29/32					
-63	1-31/32					
-65	2-1/32					
-67	2-3/32					
-69	2-5/32					
-71	2-7/32					
-73	2-9/32					
-75	2-11/32					CALL
-79	2-15/32					
-81	2-17/32					
-83	2-19/32					
-85	2-21/32					
-87	2-23/32					
-89	2-25/32					
-91	2-27/32					
-93	2-29/32					
-95	2-31/32					
-97	3-1/32					
-99	3-3/32					
-101	3-5/32					

## LOCK PINS



AN415-2 corrosion resistant steel wire cowl lock pins 1-15/16" long, .080" dia. wire.

P/N AN415-2 ..... Ea. /100

Commercial steel cadmium plated wire lock pins 1-1/4" long, .062" dia. wire. P/N 04-05100 ..... Ea. /100

## COWLING SAFETY PINS



Positive locking pins that can be readily used without aid of tools. Made of spring steel, cadmium plated, 1-1/16" long.

.051" Wire Dia. .... AN416-1 ..... Ea. /100  
.041" Wire Dia. .... AN416-2 ..... Ea. /100

## TUBULAR PIN MS16562

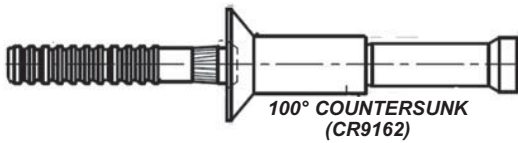


MS16562-200 PIN ..... 02-00096 .....  
TUBULAR PIN MS16562-224 ..... 04-01715 .....



# CHERRY COMMERCIAL RIVETS

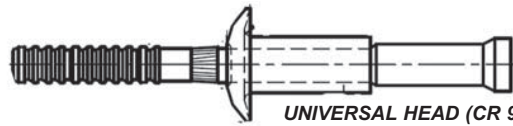
## CHERRY AEROSPACE RIVETS - SELF-PLUGGING CHERRY RIVETS



100° COUNTERSUNK  
(CR9162)

The self-plugging Cherry Blind Rivet is a 2-piece assembly - a hollow rivet and an inner member or stem, drawn into or through the hollow rivet. Cherry CR162 & CR163 series rivets are now replaced by CR9162 & CR9163 series rivets which are less expensive but do require the use of G-25B hand rivet gun with H-901-5-4C pulling head attached or G-29 which comes with the req. nosepiece.

P/N 04-01515 Pulling Head (required).....  
G-29.....P/N 12-00701 .....



UNIVERSAL HEAD (CR 9163)

Part No.	Head Style	Nominal Dia.	Grip Range	Price		
				Each	100	1000
CR9162-4-2	Csk	1/8"	.063- .125	.	.	.
CR9162-4-4			.188- .250	.	.	.
CR9162-4-6			.313- .375	.	.	.
CR9162-4-8			.438- .500	.	.	.
CR9163-4-2	Univ.	1/8"	.063- .125	.	.	.
CR9163-4-4			.188- .250	.	.	.
CR9163-4-6			.313- .375	.	.	.
CR9163-5-2	Univ.	5/32"	.063- .125	.	.	.

### CHERRY N RIVETS

Break mandrel rivets Conform to MIL-R-24243 & IFI-114 Standards



#### LOW COST

Substantial savings in installed costs can be realized when Cherry N Rivets are substituted for spotwelds, screws or bolts.

#### FAST INSTALLATION

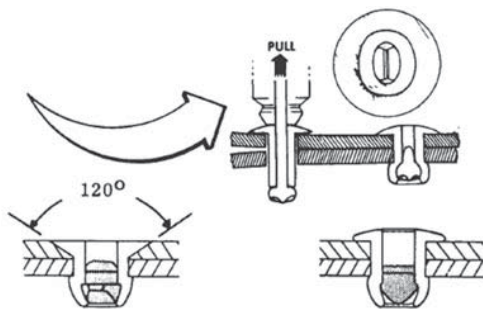
Quick and easy to use with hand or power riveters, Cherry N Rivets have endless fastening applications in manufacturing, maintenance.

#### UNIQUE FEATURES

Unusual mandrel design of Cherry N Rivets holds rivet and mandrel firmly together prior to installation and insures positive mandrel retention in the installed rivet.

#### NO MANDREL POP OUTS—

As the mandrel is drawn into the rivet, the end of the rivet sleeve closes in an elliptical configuration... locking the mandrel firmly in place!



### FLUSH HEAD PROTRUDING HEAD CHERRY N RIVET IDENTIFICATION CODE

#### First letter is rivet material:

A = 5052 Aluminum    B = 5056 Aluminum    C = Stainless  
M = Monel            S = Steel                                            U = Copper

#### Second letter is mandrel material:

A = 7178 Aluminum    S = Steel                                            C = Stainless

#### Third letter is head style:

P = Protruding                                    L = Large                                            C = Flush

#### First number is rivet diameter in 32nds of an inch:

For example,—4 is 4/32nds or 1/8" diameter

#### Second number is rivet maximum grip length in 16ths of an inch:

For example,—6 is 6/16ths or 3/8" grip length

#### MINIMUM RIVET SHEAR AND TENSILE STRENGTH (IBS.)

### CHERRY N RIVETS

RIVET DIAM. MAND.	BS SERIES ALUM RIVET STEEL MAND.		MS SERIES MONEL RIVET STEEL MAND.		CC SERIES STAINLESS RIVET STAINLESS	
	GRADE 19		GRADE 40		GRADE 51	
	Shear	Tens	Shear	Tens	Shear	Tens
3/32	125	175	200	300	230	280
1/8	200	325	350	525	450	600
5/32	325	450	600	900	750	1000
3/16	430	650	750	1100	1000	1300
1/4	750	1050	1450	2150	1700	2250

NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALENT RIVETS MAY BE FURNISHED.

### CHERRY Q RIVETS Structural—Self-plugging rivets



#### HIGH SHEAR STRENGTH

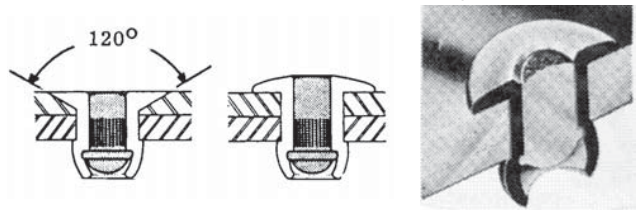
Cherry Q Rivet mandrel plugs the entire length of the rivet sleeve, providing full shear strength values for structural or load-bearing applications.

#### SEALING CAPABILITY

Specially designed mandrel of the Q Rivet is engineered to effect a seal, upon installation which offers resistance to leakage.

#### VIBRATION RESISTANT

Rivet sleeve curls over end of mandrel to insure its positive retention.



### FLUSH HEAD PROTRUDING HEAD CHERRY Q RIVET IDENTIFICATION CODE

#### First letter is rivet material:

A = 5052 Aluminum    B = 5056 Aluminum    C = Stainless  
M = Monel                                            S = Steel

#### Second letter is mandrel material:

A = 7178 Aluminum    S = Steel                                            C = Stainless

#### Third letter is head style:

P = Protruding                                    L = Large                                            C = Flush

#### Fourth letter is type of rivet:

Q = Cherry Q Rivet, structural, self-plugging

#### First number is rivet diameter in 32nds of an inch:

For example,—6 is 6/32nds or 3/16" diameter

#### Second number is rivet maximum grip length in 1/16 of an inch:

For example,—8 is 8/16ths or 1/2" grip length

### MINIMUM RIVET SHEAR AND TENSILE STRENGTH (IBS.) CHERRY Q RIVETS

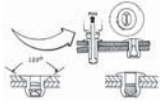
RIVET DIAM.	BS SERIES ALUM RIVET STEEL MAND.		MS SERIES MONEL RIVET STEEL MAND.		CC SERIES STAINLESS RIVET STAINLESS MAND. GRADE 51	
	GRADE 19		GRADE 40		GRADE 51	
	Shear	Tens	Shear	Tens	Shear	Tens
1/8	350	325	650	525	700	600
5/32	525	450	950	900	1050	1000
3/16	750	650	1450	1100	1650	1300
1/4	1250	1050	2350	2150	2450	2250

HA

# "POP" RIVETS – RIVNUTS

For conversion of the most frequently used "Pop" rivets to the corresponding CHERRY numbers, see the following table. **NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALENT RIVETS MAY BE FURNISHED.**

G



Grip is total of material thickness

**CHERRY** – Commercial rivets with maximum grip length greater than the material thickness may be substituted for a rivet of the required grip length.

HA

## CHERRY COMMERCIAL RIVET PRICE TABLE

Cherry Rivet		USM "POP" Rivet Equiv.*	Rivet Dia.	Drill Size	Cherry Max Rivet Grip Length	Price**					
Type	Number					Price Ea. 1-99	Price Per 100	Price for 600	Price for 1000	Price for 3000	Price for 10,000
"N"	BSP-41	AD41BS	1/8"	30	.062						
	BSPS-42				.125						
	BSPS-43				.185						
	BSPS-44				.250						
	BSP-46				.375						
	BSP-48				.500						
"N"	BSC-43	AK43BS	1/8"	30	.187						
	-44	44BS			.250						
"N"	MSP-32	MD319BS	3/32"	41	.125						
	-42	424BS	1/8"		.125						
	-43	429BS			.187						
	-44	435BS			.250						
	-45	440BS			.312						
"N"	CCC-32	MK319BS	3/32"	41	.125						
	-42	424BS	1/8"	30	.125						
"N"	CCP-42	SSD42SSDS	1/8"	30	.125						
	-44				.250						
"N"	SSP-42		1/8"	30	.125						
	-44				.250						
"N"	-45		1/8"		.312						
	SSC-43		1/8"		.187						
"Q"	BSPQ-41	AD41H	1/8"	30	.062						
	-42	AD42H		30	.125						
	-43	AD43H			.187						
	-44	AD44H			.250						
	-46	AD46H			.375						
"Q"	AAPQ-42	AD43H	1/8"	30	.125						
	-44	AD44H		30	.250						

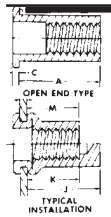
\*All USM "Pop" rivets are 1/64" larger than nominal diameter. Presented here for cross reference purposes only. \*\*Quotations on larger quantities.

## AVEX NON-STRUCTURAL BLIND RIVETS

Avex non- structural blind rivets, with aluminum body and steel stem, are similar to the Cherry BSP and BSC commercial rivets. We stock the standard dome head, 120° countersunk head and the low-profile "Lo-Pro" dome head rivets in diameters up to 3/16".

Head Style	Part No.	Dia.	Grip Range	Price		
				Each	100	1000
Dome	1601-0410	1/8"	To .187			
	1601-0414	1/8"	To .312			
	1601-0613	3/16"	To .250			
Counter-sunk (120°)	1601-0619	3/16"	To .437			
	1604-0412	1/8"	To .250			
	1604-0514	5/32"	To .312			
Lo-Pro	1604-0615	3/16"	To .312			
	1661-0613	3/16"	To .250			
	1661-0621	3/16"	To .500			

## RIVET NUTS (OPEN END)



The Rivet nut is a one-piece internally threaded and counter-bored tubular aluminum rivet that can be pulled up or headed while working entirely from one side, forming a bulge or head on the blind side. This upset is large enough to resist being pulled through metal or plastic even under conditions of eccentric load. It overcomes the difficulty of installing brackets, handles or other attachments to tubular pieces.

### FLAT HEAD

Part No.	Type	Grip Range	Length	Thread	Price/ea.
NAS1329A06K75	Keyed	.010-.075	.438	6-32	
NAS1329A06-75	Keyless	.010-.075	.438	6-32	
NAS1329A06K120	Keyed	.075-.120	.500	6-32	
NAS1329A06-120	Keyless	.075-.120	.500	6-32	
NAS1329A08K75	Keyed	.010-.075	.438	8-32	
NAS1329A08-75	Keyless	.010-.075	.438	8-32	
NAS1329A08K120	Keyless	.075-.120	.500	8-32	
NAS1329A08-120	Keyless	.075-.120	.500	8-32	
NAS1329A3K80	Keyed	.010-.075	.438	10-32	
NAS1329A3-80	Keyless	.010-.075	.438	10-32	
AEA10K140	Keyed	.075-.140	.500	10-32	
AEA10-140	Keyless	.075-.140	.500	10-32	

### COUNTERSUNK HEAD

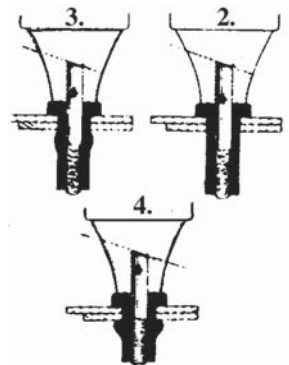
Part Number		Grip Range	Length	Thread	Price Each
Keyed	Keyless				
NAS1330A06K106	NAS1330A06-106	.065-.106	.500	6-32	
NAS1330A08K106	NAS1330A08-106	.065-.106	.500	8-32	

## RIVET NUT INSTALLATION

Rivet Nut is threaded onto pull-up stud of a hand or power-heading tool.

**SEE TOOLS SECTION (PAGE 600) FOR RIVET NUT TOOLS.**

Rivet Nut on header tool mandrel, inserted in drilled hole ready for installation. Arrow indicates direction of mandrel movement as tool is operated. Mandrel retracts pulling threaded portion of Rivet Nut shank toward blind side of work, forming bulge around unthreaded shank area. Rivet Nut is clinched securely in place. Unthreading the tool mandrel leaves internal Rivet Nut threads intact, unharmed.

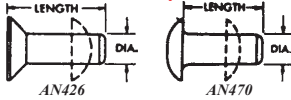


**BLIND NUT PLATE** - Installed Rivet Nut also serve as blind nut plates for simple screw attachments.

# RIVETS – CHERRYMAX – CHERRYLOCK

## SOLID ALUMINUM RIVETS

### AN426 (MS20426) AN470 (MS20470)



"A" rivets are "soft". They are fabricated from 1100-grade aluminum and have a tensile strength of 16,000 PSI. "AD" rivets are fabricated from 2117 aluminum and heat treated to the T4 condition. They have a shear strength of 26,000 PSI and a tensile strength of 38,000 PSI. All rivets sold in 1/4 lb. & 1/8 lb. packages.

Dash No.	Dia. x L	Price per 1/4 Lb.		Qty Lb.	Price per 1/4 Lb		Qty Lb.
		AN426A	AN426AD		AN470A	AN470AD	
3-2	3/32 x 1/8			6406			4107
3-3	3/32 x 3/16			5003			3485
3-4	3/32 x 1/4			4103			3027
3-5	3/32 x 5/16			3478			2675
3-6	3/32 x 3/8			3018			2397
3-7	3/32 x 7/16			2666			2171
3-8	3/32 x 1/2			2161			1826
3-10	3/32 x 5/8			1817			1576
3-12	3/32 x 3/4			1640			1403
3-14	3/32 x 7/8			1567			1386
3-16	3/32 x 1			1378			1237
4-3	1/8 x 3/16			2810			1734
4-4	1/8 x 1/4			2308			1529
4-5	1/8 x 5/16			1958			1367
4-6	1/8 x 3/8			1700			1236
4-7	1/8 x 7/16			1502			1128
4-8	1/8 x 1/2			1346			1037
4-9	1/8 x 9/16			1219			960
4-10	1/8 x 5/8			1025			836
4-12	1/8 x 3/4			885			740
4-13	1/8 x 13/16			797			715
4-14	1/8 x 7/8			631			689
4-16	1/8 x 1			592			594
4-20	1/8 x 1-1/4			467			521
4-22	1/8 x 1-3/8			328			496
5-4	5/32 x 1/4			1440			888
5-5	5/32 x 5/16			1226			850
5-6	5/32 x 3/8			1079			802
5-7	5/32 x 7/16			946			672
5-8	5/32 x 1/2			849			621
5-9	5/32 x 9/16			770			578
5-10	5/32 x 5/8			649			507
5-12	5/32 x 3/4			494			407
5-16	5/32 x 1			450			366
5-22	5/32 x 1-3/8			368			314
6-5	3/16 x 5/16			846			515
6-7	3/16 x 7/16			728			436
6-10	3/16 x 5/8			451			334
6-14	3/16 x 7/8			390			299

10% Discount for 5lbs. of rivets or more (per P/N)

## SOLID RIVET ASSORTMENT

"AD" indicates Hard 2117 aluminum alloy. These rivets are heat treated and have a minimum tensile strength of 38,000 PSI. "A" indicates Soft 100 pure aluminum and have a minimum tensile strength of 16,000 PSI.

Each kit contains 1/8 lb each of the following 12 sizes:

3/32 (3-4, 3-6, 3-8); 5/32 (5-4, 5-5, 5-6, 5-8); 1/8 (4-4, 4-6, 4-8); 3/16 (6-6, 6-8)

Pack C ..... AN470AD, Universal Hard .....P/N 04-00357  
 Pack D ..... AN470A, Universal Soft .....P/N 04-00358  
 Pack E ..... AN426AD, 100° CSK Hard .....P/N 04-00359  
 Pack F ..... AN426A, 100° CSK Soft .....P/N 04-00361

## OVER SIZE AND HALF SIZE RIVETS

**HALF-SIZE LENGTH RIVETS** - These flush head AN426 rivets are ideal for those situations where one length is just too short & the next length is too long.

Part No.	Dia.	Length	Price Per 1/8 Lb.
AN426AD-3-3.5	3/32"	7/32"	
AN426AD-3-4.5	3/32"	9/32"	
AN426AD-3-5.5	3/32"	11/32"	

**OVERSIZE SHANK RIVETS** - These NAS1097 rivets feature a 1/8" diameter shank with a head size that of a 3/32" rivet. Perfect when rivet hole becomes enlarged requiring 1/8" shank but 3/32" head matches rest of your 3/32" rivets.

Part No.	Dia.	Length	Price Per 1/8 Lb.
NAS1097AD-4-3.5	1/8"	7/32"	
NAS1097AD-4-4	1/8"	1/4"	
NAS1097AD-4-5	1/8"	5/16"	
NAS1097AD-4-6	1/8"	3/8"	

## CHERRYMAX RIVETS



100° Countersunk Head (CR3242 & CR3212)

Universal Head (CR3243 & CR3213)

Due to the large bulbed blind head, similar to that of a solid rivet, the Cherrylock and CherryMax rivets are especially suited for double dimpled or high vibration applications. They can be used as replacements for some solid rivets and are excellent for use in fiberglass or composites as the rivet spreads in a way that prevents crazing or cracking of the material. NOTE: CR3212 & CR3213 are nominal diameters. CR3242 & CR3243 are oversized diameters and measure 1/64" more than listed diameter.

Install with P/N 12-03105 G-27 Hand Gun.

Dash #	Dia.	CR3212 Grip Range	CR3213 Grip Range	Each	Price 100
4-1		----	.025-.062	---	---
4-2		.063-.125	.063-.125		
4-3	.126	.126-.187	.126-.187		
4-4		.188-.250	.188-.250		
4-5		.251-.312	.251-.312		
4-6		.313-.375	.313-.375		
5-2		.065-.125	.063-.125		
5-3		.126-.187	.126-.187		
5-4	.157	.188-.250	.188-.250		
5-5		.251-.312	.251-.312		
5-6		.313-.375	.313-.375		
6-10	.189	.563-.625	.563-.625		

Dash #	Dia.	CR3242 Grip Range	CR3243 Grip Range	Each	Price 100
4-1		.045-.025	.025-.062		
4-2		.063-.125	.063-.125		
4-3		.126-.187	.126-.187		
4-4	.140	.188-.250	.188-.250		
4-5		.251-.312	.251-.312		
4-6		.313-.375	.313-.375		
5-2		.063-.125	.063-.125		
5-3		.126-.187	.126-.187		
5-4	.173	.188-.250	.188-.250		
5-5		.251-.312	.251-.312		
5-6		.313-.375	.313-.375		

NOTE: SUBJECT TO PRICE AND AVAILABILITY OF CHERRY BRAND RIVETS. EQUIVALENT RIVETS MAY BE FURNISHED.

## CHERRYMAX GRIP GAUGE



Measures rivet diameter and length, P/N 12-00217

## RIVET/RIVNUT BACK MARKERS



Used to locate pre-drilled holes in the wing ribs, fuel tank covers, panels, skin. Pre-drill the ribs, screw in the back markers, lay the skin sheet over the top, tap with a hammer, turn the sheet over, and drill the holes. This is especially useful for rivnut installation. Due to the large size of the hole required, small errors in location can lead to the "Oh darn, I missed the rib syndrome". Backmarkers can save you hours of frustration. Two sizes of threaded backmarkers are available. We recommend

using the 04-00131 for wing ribs. Drilling the wing ribs with a 3/32" drill. Drop in the back markers. Mark the skin by taping with a soft hammer. Turn the skin over and drill the skin with a 3/32" drill. Cleco the skin into position enlarge the holes with #30 drill & cleco. Now you are ready to rivet.

Nut Plate	Marker Size	Drill Size	Part No.	Price Ea.
10-32*	—	—	04-00117	
8-32*	—	—	04-00119	
3/8-24	.327	5/8"	04-00121	
5/16-24	.265	1/2"	04-00122	
1/4-28	.209	1/2"	04-00123	
10-32	.154	3/8"	04-00124	
8-32	.128	3/8"	04-00127	
6-32	.102	3/8"	04-00129	
3/32" hole	.093	3/8"	04-00131	

# NUTSERTS

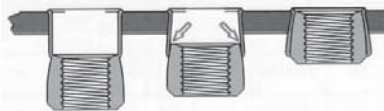


The A-T Series Insert is unique in that it can be installed into most any material above .030/.76 mm in thickness. As the A-T Series is installed, the threaded portion is completely swaged 360° into the sleeve portion and the hole. This permits the A-T Series to be used with Grade 8/metric 12.9 mating screws.

The A-T Series Insert is installed using light-weight, hand held pneumatic tools that can be located at any position in your product's assembly sequence. The A-T Series Insert can be installed either prior to or after finish.

## 360° SWAGING HOW IT WORKS FOR YOU

As the A-T Series Insert is installed, the threaded nut portion is drawn into the upper sleeve portion.



As this occurs, a 360° swaging action takes place anchoring the A-T Series in the parent material.

## NUTSERT HOLE SIZE / MATERIAL THICKNESS CHART

Installation hole size for the A-T Series Insert is determined by the parent material's thickness and density. The thicker the material the larger the hole required to allow full 360° installation swaging. The application should be tested before hole size is specified.

THREAD SIZE	.030-.090 MAT. THICKNESS		.091-.124 MAT THICKNESS		.125-.186 MAT. THICKNESS		.187-OVER MAT. THICKNESS	
	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL	DRILL SIZE	DECIMAL
4-40 UNC	3/16	.1875	#10	.1935	#10	.1935	#9	.1960
6-32 UNC	7/32	.2188	#2	.2210	#1	.2280	#1	.2280
8-32 UNC	1/4	.2500	"F"	.2570	17/64	.2656	17/64	.2656
10-24 UNC	9/32	.2812	"L"	.2900	"L"	.2900	19/64	.2969
10-32 UNF	9/32	.2812	"L"	.2900	"L"	.2900	19/64	.2969
1/4-20 UNC	3/8	.3750	3/8	.3750	"W"	.3860	25/64	.3906
1/4-28 UNC	3/8	.3750	3/8	.3750	"W"	.3860	25/64	.3906
5/16-18 UNC	1/2	.5000	1/2	.5000	33/64	.5156	33/64	.5156
5/16-24 UNC	1/2	.5000	1/2	.5000	33/64	.5156	33/64	.5156
3/8-16 UNC	9/16	.5625	9/16	.5625	37/64	.5781	37/64	.5781
1/2-13 UNC	3/4	.7500	49/64	.7656	25/32	.7810	51/64	.7970



THREAD SIZE	THREAD CALL OUT	HD ±.005	L ±.015	D MAX.	IL MAX.	LB ±.015	ILB MAX.	IATD** MAX.	HOLE DEPTH MIN.	PART NO.	PRICE EACH
4-40 UNC	440	.211	.370	.1875	.205	.660	.495	.395	.400	ATS2-440	.
6-32 UNC	632	.240	.370	.2185	.205	.675	.505	.410	.400	ATS2-632	.
8-32 UNC	832	.269	.370	.2495	.205	.675	.505	.410	.400	ATS2-832	.
10-24 UNC	1024	.306	.370	.2805	.205	.685	.520	.385	.400	ATS2-1024	.
10-32 UNF	1032	.306	.370	.2805	.205	.685	.520	.385	.400	ATS2-1032	.
1/4-20 UNC	420	.400	.515	.3745	.275	1.005	.760	.615	.540	ATS2-420	.
1/4-28 UNC	420	.400	.515	.3745	.275	1.005	.760	.615	.540	ATS2-428	.
5/16-18 UNC	518	.528	.615	.4995	.325	1.065	.770	.630	.640	ATS2-518	.
5/16-24 UNC	518	.528	.615	.4995	.325	1.065	.770	.630	.640	ATS2-524	.
3/8-16 UNC	616	.588	.745	.5615	.390	1.450	1.095	.890	.770	ATS2-616	.
1/2-13 UNC	813	.800	.935	.7485	.485	NA	NA	NA	.960	ATS2-813	.

\*\*Dimensions in minimum grip condition. Additional UNF thread sizes available.

### AA-112 HI-TORQUER NUTSERT TOOLS



The hi-torquer tool is ideal for field and maintenance applications. It features a patented Quick Change thread size nose assembly. Order one base tool plus appropriate conversion kit. No warranty on these tools.

THREAD SIZE	CONV. KIT PART NO.	PRICE EACH
4-40 UNC	AAT-202-440	.
6-32 UNC	AAT-202-632	.
8-32 UNC	AAT-202-832	.
10-24 UNC	AAT-202-1024	.
10-32 UNF	AAT-202-1032	.
1/4-20 UNC	AAT-202-420	.
1/4-28 UNC	AAT-202-428	.
5/16-18 UNC	AAT-202-518	.
5/16-24 UNC	AAT-202-524	.
3/8-16 UNC	AAT-202-616	.
Base tool. P/N AA-112.....		.

### AAT916 EXPENDABLE NUTSERT TOOLS



These expendable tools are ideal for applications such as field repair. They can also be packaged with instructions for use along with quantity of inserts for consumer assembly. Sizes 6-32, 8-32 include a hex key. Sizes 10-32, and larger require a wrench (not included). No warranty on these tools.

THREAD SIZE	TOOL PART NUMBER	PRICE EACH
4-40 UNC	AAT-916-440	.
6-32 UNC	AAT-916-632	.
8-32 UNC	AAT-916-832	.
10-24 UNC	AAT-916-1024	.
10-32 UNF	AAT-916-1032	.
1/4-20 UNC	AAT-916-420	.
1/4-28 UNC	AAT-916-428	.
5/16-18 UNC	AAT-916-518	.
5/16-24 UNC	AAT-916-524	.
1/2-13 UNC	AAT-916-813	.
3/8-16 UNC	AAT-916-616	.

### AAT312A MASTER NUTSERT ASSORTMENT KIT



The A-T Series master assortment kit is ideal for prototype and maintenance repair applications. The rugged hard shell plastic kit contains quantities of the A-T Series Inserts and the AA 112 Hi-torquer tool. It also contains a full compliment of thread size conversion kits and instruction label. No warranty on these tools.

#### KIT CONTAINS:

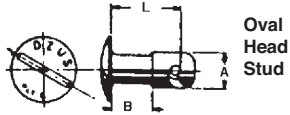
THREAD SIZE	QTY	NUTSERT PART NO.	CONV. KIT
4-40 UNC	50	ATS2-440	AAT-202-440
6-32 UNC	50	ATS2-632	AAT-202-632
8-32 UNC	50	ATS2-832	AAT-202-832
10-32 UNF	50	ATS2-1032	AAT-202-1032
1/4-20 UNC	50	ATS2-420	AAT-202-420
5/16-18 UNC	50	ATS2-518	AAT-202-518

Kit. P/N AAT312A.....

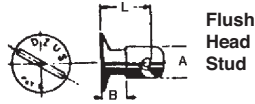
Nutsert available. Sold Each.

HA

# DZUS FASTENERS



Oval Head Stud



Flush Head Stud



Wing Head Stud

## OVAL HEAD STUD, LONG UNDERCUT

Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
121J-325-Z3C	.1875	.075	.250	AJ3-25*	-	-	-	-	GA3-175, 200, 250	S3-150, 175 200,225
121J-330-Z3C	.1875	.100	.300	AJ3-30	-	-	-	-	GP3B, GH3	
121J-335-Z3C	.1875	.150	.350	AJ3-35*	-	121J-335-SS	AJ3-35SS*	-	SR3SS	
121J-340-Z3C	.1875	.200	.400	AJ3-40	-	-	-	-	SX-520SS	
121J-425-Z3C	.250	.100	.250	AJ4-25*	-	121J-425-SS	AJ4-25SS*	-	GA4-225, 250, 275, 300	S4-200, 225
121J-430-Z3C	.250	.100	.300	AJ4-30	-	121J-430-SS	AJ4-30SS	-		
121J-435-Z3C	.250	.150	.350	AJ4-35*	-	121J-435-SS	AJ4-35SS*	-		
121J-440-Z3C	.250	.200	.400	AJ4-40	-	121J-440-SS	AJ4-40SS	-		
121J-445-Z3C	.250	.225	.450	AJ4-45*	-	-	-	-		
121J-450-Z3C	.250	.250	.500	AJ4-50	-	-	-	-		
121J-530-Z3C	.3125	.125	.300	AJ5-30	-	121J-530-SS	AJ5-30SS	-		
121J-535-Z3C	.3125	.125	.350	AJ5-35*	-	121J-535-SS	AJ5-35SS*	-		
121J-540-Z3C	.3125	.190	.400	AJ5-40	-	121J-540-SS	AJ5-40SS	-	GA5-312, 350, 375	S5A200, 225 250, 275
121J-545-Z3C	.3125	.190	.450	AJ5-45*	-	-	-	-		
121J-550-Z3C	.3125	.250	.500	AJ5-50	-	-	-	-		
121J-560-Z3C	.3125	.300	.600	AJ5-60	-	-	-	-	GA6-350, 375, 425	S6-225, 250, 275 300
121J-570-Z3C	.3125	.400	.700	AJ5-70	-	-	-	-		
121J-635-Z3C	.375	.150	.350	AJ6-35*	-	-	-	-		
121J-640-Z3C	.375	.190	.400	AJ6-40	-	-	-	-		
121J-650-Z3C	.375	.250	.500	AJ6-50	-	-	-	-		
121J-660-Z3C	.375	.300	.600	AJ6-60	-	-	-	-		
121J-670-Z3C	.375	.350	.700	AJ6-70	-	-	-	-		
121J-740-Z3C	.4375	.190	.400	AJ7-40	-	-	-	-	GA7-375, 475, 525	S7-225, 250, 275, 300
121J-750-Z3C	.4375	.250	.500	AJ7-50	-	-	-	-		
121J-760-Z3C	.4375	.300	.600	AJ7-60	-	-	-	-		
121J-770-Z3C	.4375	.350	.700	AJ7-70	-	-	-	-		

HA

## FLUSH HEAD STUD, LONG UNDERCUT

Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
126J-330-Z3C	.1875	.150	.300	FJ3-30	-	-	-	-	GP3B-GH3	S3-150, 175, 200, 225
126J-335-Z3C	.1875	.175	.350	FJ3-35*	-	-	-	-	SR3SS	
126J-340-Z3C	.1875	.200	.400	FJ3-40	-	-	-	-	SX-520SS	
-	.250	.150	.300	N/A	N/A	126J-430-SS	FJ4-30SS	-	GF4-125, 150, 175, 200	S4-200, 225
126J-435-Z3C	.250	.175	.350	FJ4-35*	-	126J-435-SS	FJ4-35SS1	-		
126J-440-Z3C	.250	.200	.400	FJ4-40	-	126J-440-SS	FJ4-40SS	-		
126J-445-Z3C	.250	.225	.450	FJ4-45*	-	126J-445-SS	FJ4-45SS1	-		
126J-450-Z3C	.250	.250	.500	FJ4-50	-	-	-	-	GF5-175, 225, 250	S5A200, 225 250, 275
126J-540-Z3C	.3125	.225	.400	FJ5-40	-	126J-540-SS	FJ5-40SS	-		
126J-550-Z3C	.3125	.250	.500	FJ5-50	-	-	-	-		
126J-560-Z3C	.3125	.300	.600	FJ5-60	-	-	-	-		
126J-650-Z3C	.375	.250	.500	FJ6-50	-	-	-	-		
126J-660-Z3C	.375	.300	.600	FJ6-60	-	-	-	-		
126J-670-Z3C	.375	.350	.700	FJ6-70	-	-	-	-		
126J-750-Z3C	.4375	.250	.500	FJ7-50	-	-	-	-	GF7-250, 325, 400	S7-225, 250, 275, 300
126J-760-Z3C	.4375	.300	.600	FJ7-60	-	-	-	-		
126J-770-Z3C	.4375	.350	.700	FJ7-70	-	-	-	-		

## WING HEAD STUD, LONG UNDERCUT

(A, B, L dimensions for AJW are same as for AJ; P, Q, R dimensions given are for wing head)

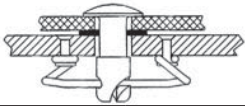
Model No.	Stud Dimensions			Zinc Electroplated		Model No.	Stainless		GROMMETS & SNAP RINGS	SPRINGS
	A	B	L	Cat. #	Price Each		Cat. #	Price Each		
121J-W325-Z3C	.1875	.075	.250	AJW3-25*	-	-	AJW3-25SS*	-	GA3-175, 200, 250	S3-150, 175 200, 225
121J-W330-Z3C	.1875	.100	.300	AJW3-30	-	-	-	-	GP3B, GH3	
121J-W335-Z3C	.1875	.150	.350	AJW3-35*	-	-	-	-	SR3SS	
121J-W340-Z3C	.1875	.200	.400	AJW3-40	-	-	-	-	SX-520SS	
121J-W425-Z3C	.250	.100	.250	AJW4-25*	-	-	-	-	GA4-225, 250, 275, 300	S4-200, 225
121J-W430-Z3C	.250	.100	.300	AJW4-30	-	-	-	-		
121J-W435-Z3C	.250	.150	.350	AJW4-35*	-	-	-	-		
121J-W440-Z3C	.250	.200	.400	AJW4-40	-	-	-	-		
121J-W530-Z3C	.3125	.125	.300	AJW5-30	-	-	-	-	GA5-312, 350, 375	S5A200, 225
121J-W540-Z3C	.3125	.190	.400	AJW5-40	-	-	-	-		
121J-W545-Z3C	.3125	.200	.450	AJW5-45*	-	-	-	-		
121J-W550-Z3C	.3125	.250	.500	AJW5-50	-	-	-	-		

**CAD PLATED FASTENERS ARE NO LONGER AVAILABLE DUE TO ENVIROMENTAL REASONS.**

\*No longer available after our current stock is depleted. Please order next longer size.

# DZUS FASTENERS

## STUD AND SPRING SELECTION TABLES



1. Find total thickness (distance) from underside of stud head to point of spring attachment).
2. Select stud "L" and spring "H" dims.

Size 3 Stud, S3 Spring USE			Size 4 Stud, S4 Spring USE		
Total Thickness	Stud Dim. L	Spring Dim. H	Total Thickness	Stud Dim. L	Spring Dim. H
.045 - .069	-25	-225	.050 - .074	-25	-225
.070 - .094	-25	-200	.075 - .099	-25	-200
.095 - .119	-30	-225	.100 - .124	-30	-225
.120 - .144	-30	-200	.125 - .149	-30	-200
.145 - .169	-30	-175	.150 - .174	-35	-225
.170 - .194	-30	-150	.175 - .199	-35	-200
.195 - .219	-35	-175	.200 - .224	-40	-225
.220 - .224	-35	-150	.225 - .249	-40	-200
.245 - .269	-40	-175	.250 - .274	-45	-225
.270 - .294	-40	-150	.275 - .299	-45	-200
			.300 - .324	-50	-225
			.325 - .344	-50	-200

Size 5 Stud, S5A Spring USE			Size 6 Stud, S6 Spring Size 7 Stud, S7 Spring USE		
Total Thickness	Stud Dim. L	Spring Dim. H	Total Thickness	Stud Dim. L	Spring Dim. H
.055 - .079	-30	-275	.090 - .114	-35	-300
.080 - .104	-30	-250	.115 - .139	-35	-275
.105 - .129	-30	-225	.140 - .164	-35	-300
.130 - .154	-30	-200	.165 - .189	-40	-275
.155 - .179	-40	-275	.190 - .214	-40	-250
.180 - .204	-40	-250	.215 - .239	-40	-225
.205 - .229	-40	-225	.240 - .264	-50	-300
.230 - .254	-40	-200	.225 - .249	-40	-200
.255 - .279	-50	-275	.265 - .289	-50	-275
.280 - .304	-50	-250	.290 - .314	-50	-250
.305 - .329	-50	-225	.315 - .339	-50	-225
.330 - .354	-50	-200	.340 - .364	-60	-300
.355 - .379	-60	-275	.365 - .389	-60	-275
.380 - .404	-60	-250	.390 - .414	-60	-250
.405 - .429	-60	-225	.415 - .439	-60	-225
.430 - .454	-60	-200	.440 - .464	-70	-300
.455 - .479	-70	-275	.465 - .489	-70	-275
.480 - .504	-70	-250	.490 - .514	-70	-250
.505 - .529	-70	-225	.515 - .539	-70	-225
.530 - .554	-70	-200			

## INSTALLATION TOOLS

Part No.	Description (Installs:)	Price
04-01441	A, AJ3 Oval Head Studs & Grommets	.
04-01410	A4, AJ4 Oval Head Studs & Grommets	.
04-01409	A5, AJ5 Oval Head Studs & Grommets	.
04-01442	A6.5, AJ6.5 Oval Head Studs & Grommets	.
04-01413	A7, AJ7 Oval Head Studs & Grommets	.
04-01447	F5, FJ5 Flush Head Studs & Grommets	.
04-01637	F6.5, FA6.5, FJ6.5 Flush Head Studs & Grommets	.

\* Note: A5 tool is specially designed to install grommets in Bonanza cowlings without removing cowling brackets. This will save you a lot of time.

Description	Part No.	Price
Modified C-Clamp (Required and Accepts All Attachment Sets)	12-02272	.

## RETAINING SPRINGS

When there is a gap between the top and bottom panels, a retaining spring is used to hold the stud in locking position for alignment with receptacle.

Model No.	Part No.	Price ea
1219-24520-SS	SX-520SS	.
1219-24523-SS	SX-523SS	.
1219-24510-SS	SX-510SS	.
1219-24518-SS	SX-518SS	.
1219-24519-SS	SX-519SS	.

## SNAP RINGS

A snap ring is used when there is not a lot of pull-out load. This ring is expandable easily installed with pliers or screwdriver and takes little space.

Model No.	Part No.	Price ea
1219-R3-SS	SR3SS	.
1219-R4-SS	SR4SS	.
1219-R5-SS	SR5SS	.
1219-R6-SS	SR6SS	.
1219-R7-SS	SR7SS	.

## SPRINGS

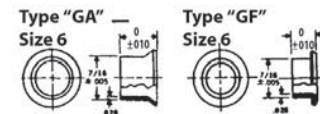


Model No.	Part No.	Price Ea.	Model No.	Part No.	Price Ea.
1219-3175-Z3Y	S3-175	.	1219-5300-Z3Y	S5A-300	.
1219-3200-Z3Y	S3-200	.	1219-6225-Z3Y	S6A-225	.
1219-3225-Z3Y	S3-225	.	1219-6250-Z3Y	S6A-250	.
1219-4220-Z3Y	S4-200	.	1219-6275-Z3Y	S6A-275	.
1219-4225-Z3Y	S4-225	.	1219-6300-Z3Y	S6-300	.
1219-4250-Z3Y	S4-250	.	1219-6400-Z3Y	S6A-400	.
1219-A4200-Z3Y	S4A-200	.	1219-6425-Z3Y	S6A-425	.
	S5-325-SURP	.	1219-6325-Z3Y	S5A-325	.
1219-A5200-Z3Y	S5A-200	.	1219-7225-Z3Y	S7-225	.
1219-A5225-Z3Y	S5A-225	.	1219-7250-Z3Y	S7-250	.
1219-A5250-Z3Y	S5A-250	.	1219-7275-Z3Y	S7-275	.
1219-A5275-Z3Y	S5A-275	.	1219-7300-Z3Y	S7-300	.

The dash number represents the height ("H" dimension) of the spring.

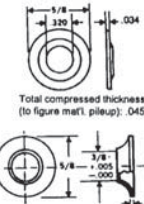
## FULL GROMMETS

A full grommet is used when protection of the hole is a definite consideration. It protects panel finish and reduces stud play. A tool is required for installation. The "GA" type full grommet is used with a protruding head stud, and the "GF" type with a flush head stud.



## ALUMINUM

Outer Panel Thickness	Type "GA"			Type "GF"		
	Model No.	Part No.	Price	Model No.	Part No.	Price
.015 - .025	1271-3175	GA3-175	.	---	N/A	---
.026 - .050	1271-200	GA3-200	.	---	N/A	---
.051 - .094	1271-250	GA3-250	.	---	N/A	---
.015 - .025	---	GA4-225	---	1276-4125	GF4-125	.
.026 - .050	1271-4250	GA4-250	.	1276-4150	GF4-150	.
.051 - .075	1271-4275	GA4-275	.	1276-4175	GF4-175	.
.076 - .100	1271-4300	GA4-300	.	1276-4200	GF4-200	.
.031 - .062	1271-5312	GA5-312	.	1276-5175	GF5-175	.
.063 - .094	1271-5350	GA5-350	.	1276-5225	GF5-225	.
.095 - .125	1271-5375	GA5-375	.	1276-5250	GF5-250	.
.040 - .065	1271-6350	GA6-350	.	---	GF6-218	---
.066 - .100	1271-6375	GA6-375	.	1276-6250	GF6-250	.
.101 - .135	1271-6425	GA6-425	.	---	---	---
.050 - .095	1271-7375	GA7-375	.	1276-7250	GF7-250	.
.096 - .156	---	GA7-475	---	---	GF7-325	---
.157 - .218	1271-7525	GA7-525	---	1276-7400	GF7-400	.



## HALF GROMMETS

A half grommet does not break easily, and it flattens but guarantees hold of the stud. It is used when protection of the hole is not a consideration, but protection of panel finish might be. The "GH" type half grommet is installed with a tool; the "GP" type is pushed on by hand.

Type "GP" Thermoplastic			Type "GH" Aluminum		
Model No.	Part No.	Price ea	Model No.	Part No.	Price ea
127P-3B	GP3B	.	127H-3	GH3	.
127P-4B	GP4B	.	127H-4	GH4	.
127P-5B	GP5B	.	127H-5	GH5	.
127P-6B	GP6B	.	127H-6	GH6	.
127P-7B	GP7B	---	127H-7	GH7	.

## DZUS FASTENER SPRING ADJUSTER

The MS-7301 tool easily adjusts Dzus fastener springs for a perfect fit every time. Great for Warbirds and vintage aircraft. Bend springs in or out with a few simple turns. P/N 04-00957.....



## DZUS DRIVER

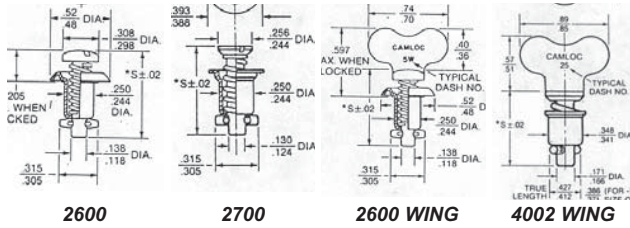
The MS-Driver is a great tool for locking and unlocking Dzus fasteners. The large handle gives you plenty of torque and is comfortable in the hand. The blade has a radius end to fit fastener slots better than a standard screwdriver and is heat treated steel with zinc plating for long life. P/N 04-00958.....



HA

# CAMLOC FASTENERS

The 2600 and 2700 series Camloc fasteners exceed requirements for MIL-F-5591, Style 3, Size 2. Shear and tensile strength: 300 lbs. (ultimate), 200 lbs. (rated). Studs and washers listed are made of steel. The receptacles are made of copper base alloy. All components listed are rated to 450° F. The 4002 series fasteners are considerably stronger than the 2600 and 2700 series. Shear and tensile strength: 1050 lbs. (ultimate), 700 lbs. (rated). All studs and grommets listed are made of steel. Rated to 450° F.



## 2600 STUDS

Dash No.	CAD Plated		Stainless		CAD Plated	
	2600 Slot Price Ea	26S8 Phillips Price Ea	Dash No.	2600 Slot Price Ea	Wing CAD Plated	Price Each
-1			-1S			
-2			-2S		2600-2W	
-3			-3S		2600-3W	
-4			-4S		2600-4W	
-5			-5S		2600-5W	
-6			-6S		2600-6W	
-7			-7S		2600-7W	
-8			-8S		2600-8W	
-9			-9S		2600-9W	
-10			-10S		2600-10W	
-11					2600-11W	
-12					2600-12W	
-13						
-14					2600-14W	

## 2700 STUDS

Dash No.	CAD Plated		Stainless	
	2700 Slot Price Ea	27S3 Phillips Price Ea	Dash No.	2700 Slot Price Ea
-1			-1S	
-2			-2S	
-3			-3S	
-4			-4S	
-5			-5S	
-6			-6S	
-7			-7S	
-8			-8S	
-9			-9S	
-10			-10S	
-11				
-13				
-14				

## 4002 STUDS

Dash No.	CAD Plated / Stainless							
	4002 CAD Plated Slot Price Ea	40S5 CAD Plated Phillips Price Ea	SS Phillips 40S5	Price Each	Dash No.	4002 SS Slot Price Ea	Wing CAD Plated	Price Each
-2			40S5-2S		-2S		4002-2W	
-3			40S5-3S		-3S		4002-3W	
-4			40S5-4S		-4S		4002-4W	
-5			40S5-5S		-5S		4002-5W	
-6			40S5-6S		-6S		4002-6W	
-7			40S5-7S		-7S			
-8			40S5-8S		-8S		4002-8W	
-9			40S5-9S		-9S		4002-9W	
-10			40S5-10S				4002-10W	
-11							4002-11W	
-12							4002-12W	
-13								
-14								
-15								
-16								
-17								

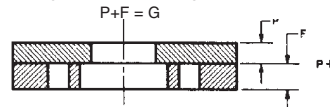
## RECEPTACLES

Rivet Holes	2600, 2700 Series		Price Each	4002 Series	
	Part No.	Price Each		Part No.	Price Each
Plain	212-12N			214-16N	
Countersunk	212-12ND*			214-16ND*	
Plain	Floating Bronze			244-16	

## 2600 / 2700 STUD LENGTH SELECTION

Total material thickness "G" consists of the thickness of all materials to be fastened. This must include the thickness of the material "P" to which the stud assembly is attached, the material "F" to which the receptacle is attached plus gaskets (if used) and allowance for paint or other protective finishes. If the total thickness is near the upper limit of the stud grip range, the next longer stud should be used. This will still maintain positive locking of the fastener under vibration.

P (panel thickness) ..... .062  
 F (frame thickness) ..... + .062  
 GRIP (total thickness) ..... = .124



## STUD SELECTION TABLE Using 212-12 Receptacle

Total Grip Thickness	Use 2600	Use 2700
.020 - .059	2600-1	2700-1
.060 - .089	2600-2	2700-2
.090 - .119	2600-3	2700-3
.120 - .149	2600-4	2700-4
.150 - .179	2600-5	2700-5
.180 - .209	2600-6	2700-6
.210 - .239	2600-7	2700-7
.240 - .269	2600-8	2700-8
.270 - .299	2600-9	2700-9
.300 - .329	2600-10	2700-10
.330 - .359	2600-11	2700-11
.360 - .389	2600-12	2700-12
.390 - .419	2600-13	2700-13
.420 - .449	2600-14	2700-14

## 4002 SERIES (LARGE HEAD) STUD SELECTION

To select the proper length stud, first select the grommet, for example 4002-G. Next, select the receptacle, such as 214-16. After determining the total grip thickness, use the grommet column under which the selected grommet and receptacle appear. Use the dash number which appears opposite the determined total grip thickness.

Example: If the total determined grip thickness "G" was .144, the stud dash number for the above 4002-G grommet and 214-16 receptacle would be -4. The stud part number would be 4002-4.

Total Grip Thickness Range "G"	Stud Dash Number	
	4002-G Grommet & 214-16 Receptacle	4002-N, 4002-O Grommet & 214-16 Receptacle
.021 - .050	--*	-1
.055 - .080	--*	-2
.081 - .110	-2*	-3
.111 - .140	-3	-4
.141 - .170	-4	-5
.171 - .200	-5	-6
.201 - .230	-6	-7
.231 - .260	-7	-8
.261 - .290	-8	-9
.291 - .320	-9	-10
.321 - .350	-10	-11
.351 - .380	-11	-12
.381 - .410	-12	-13
.411 - .440	-13	-14
.441 - .470	-14	-15
.471 - .500	-15	-16
.501 - .530	-16	-17
.531 - .560	-17	-

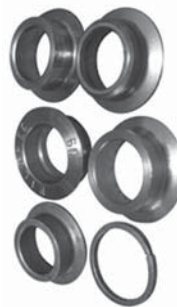
\*4002-G grommet requires .090" minimum grip.

## 2600, 2700 SERIES RETAINING WASHERS

Retaining washers are required for studs of -5 length or greater. Use split washer 2600-SW2 where it is desirable to have the stud fall away for minimum internal projection. Use internal tooth washer 2600-LW where it is desirable to retain the stud assembly rigidly.

P/N 2600-SW-2 ..... P/N 2600-LW.....

## 4002 SERIES GROMMETS & SNAP RINGS



Description	Part Number	Price Each
<b>CAD Plated</b>		
Flush Grommet	4002-G	
Plus-Flush Grommet	4002-N	
Stud Retaining Grommet	4002-O	
High Shear Flush Grommet	40G1-5	
Wide Area Grommet	4002-N3	
Grommet Retaining Ring	R4G	
High Shear Grommet Retaining Ring	R4T	
Camloc Retaining Ring	4002-SW	
<b>Stainless</b>		
Flush Grommet	4002-GS	
Flush Grommet	4002-HS	
Plus Flush Grommet	4002-NS	
Flush Grommet	4002-OS	

HA

# CAMLOC FASTENERS

## COWLING KITS

Aircraft Make & Model	Stainless				Cad-Plated Phillips	
	Slotted		Phillips		P/N	Price
	P/N	Price	P/N	Price		
Aerosport			04-00327	.		
Aero Commander 690	04-00286	.			04-00336	.
Aerostar	04-00287	.			04-00337	.
Beech Baron B55 ('69 SN TC1230) <sup>A</sup>	04-00288	.	04-00329	.		
Beech Baron B58	04-00289	.			04-00338	.
Beech Baron P58	04-00291	.				
Bellanca Scout 8GCBC	04-00292	.				
Bellanca Viking	04-00293	.			04-00339	.
Cessna 150 (1967-77)	04-00294	.	04-00331	.		
Cessna 172 (1967-82)	04-00297	.	04-00332	.		
Cessna 172RG (1984)	04-00298	.			04-00341	.
Cessna 172XP	04-00299	.			04-00342	.
Cessna 177	04-00301	.	04-00333	.		
Cessna 182 (1961-69)	04-00303	.				
Cessna 182 (1971 SN 60752)	04-00305	.	04-00334	.	04-00343	.
Cessna 182 (1973 & up)	04-00307	.			04-00344	.
Cessna 182RG	04-00309	.	04-01942	.	04-01943	.
Cessna 206	04-00310	.			04-00347	.
Cessna 210	04-00311	.			04-00348	.
Cessna 310K	04-00312	.			04-00349	.
Cessna 320	04-00313	.			04-00351	.
Cessna 337	04-00315	.			04-00352	.
Cessna 340	04-00317	.			04-00353	.
Cessna 414	04-00319	.			04-00354	.
Cessna 421	04-00320	.			04-00355	.
Mooney 20J	04-00321	.				
Piper PA18	04-00322	.				
Piper Cheyenne	04-00006	.				
Piper Comanche Twin (Nose)	04-00324	.				
Piper Comanche Twin	04-00325	.				

Kit contains Southco or Camloc studs, washers, retainers & a push tool for the Southco studs. <sup>A</sup>&<sup>B</sup>Retainers for Dzus fastener not included. <sup>B</sup> Dzus Fastener is slotted.

*The nose cowl components, if applicable, are not included in any cowling kit.*

HA



### QUICK RELEASE PINS

These pins, of stainless steel, are made to exacting standards. Push button on top contracts and releases two (or four) balls at end of shank. These balls lock onto and release from part for fast removal. The following types and sizes are most commonly used for hang gliders. Not for structural use on aircraft. Request quote on special sizes (25 piece minimum).

Part No.	Alternate Part No.	MS Part No.	Head Type	Shank Dia.	Leng.	Price
04-01486	LG4S-T-0.343	-----	TEE	1/4"	11/32"	.
04-01473	LG4S-T-1.400	MS17985-414	TEE	1/4"	1-9/32"	.
04-01487	LG4S-T-2.080	MS17985-421	TEE	1/4"	2-1/32"	.

Less 10% for 12, Less 15% for 25, Less 20% for 50.  
May be assorted.



### CAMLOC ACCESS DOORS FOR WHEEL PANTS

These 1" diameter spring loaded access doors can be riveted into your wheel pants. They open inward, so that using an appropriate tool, you can check pressure or inflate your tires easily without removing the wheel pants. Made of stainless steel which can be polished if desired. Recommended by Rutan

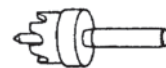
Aircraft Factory.

P/N 05-02124 ..... ea.

### CAMLOC FASTENER TOOLS



**PLIERS** P/N 4P3 .....



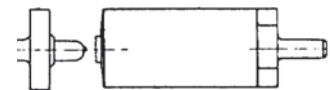
**HOLE SAWS**

Stock Sizes:  
P/N 04-01516 (.471" dia.).....  
P/N 04-01517 (.687" dia.).....  
Other diameters available



**2600-LW LOCKWASHER TOOL**

P/N T98-1 .....



**#2S200M & F  
2700 SERIES DIMPLING TOOL**

P/N 2S200M-1  
1/4"x9/16"L .....  
P/N 04-01636  
1/4"x9/16"L .....  
P/N 2S200M-2  
5/16"x5/8"L .....



**4002 SERIES  
SNAP RING TOOL**

P/N 04-01529 .....



**RECEPTACLE DRILL JIG**  
For 4002 Series and 2600/2700 Series receptacles

P/N 01-00155 .....



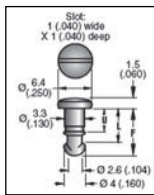
**MEASURING TOOL**

This handy tool is all stainless steel and engraved with Camloc fastener lengths from -2 to -11. Simple slide the Camloc fastener into the tool to determine the size (dash number) of the Camloc.  
P/N 12-01598 .....



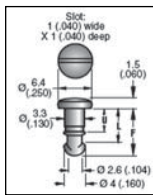
# SOUTHCO FASTENERS

## FLUSH SLOTTED



Flush Head #82 Dacrotized Slotted	
Part No.	Price
82-14-120-16	
82-28-160-16	
Oval Head #82 Dacrotized Slotted	
Part No.	Price
82-11-100-16	
82-11-120-16	
82-11-140-16	
82-11-160-16	
82-11-180-16	
82-11-200-16	
82-11-220-16	
82-11-240-16	
82-11-260-16	

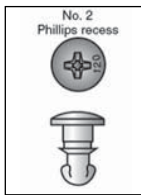
## OVAL SLOTTED



Oval Head #82 Stnls Slotted	
Part No.	Price
82-11-100-20	
82-11-120-20	
82-11-140-20	
82-11-160-20	
82-11-180-20	
82-11-200-20	
82-11-220-20	
82-11-240-20	
82-11-280-20	
Oval Head #82 Stnls Phillips	
Part No.	Price
82-19-120-20	
82-19-140-20	
82-19-160-20	
82-19-180-20	
82-19-200-20	
82-19-220-20	

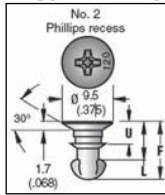
## SOUTHCO STUDS

### OVAL PHILLIPS



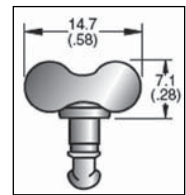
Flush Head #82 Stnls Phillips	
Part No.	Price
82-28-100-16	
82-28-120-16	
82-28-140-16	
82-28-160-16	
82-28-180-16	
82-28-200-16	
82-28-220-16	
82-28-240-16	
82-28-260-16	
82-28-280-16	
82-28-300-16	
82-28-320-16	
82-28-340-16	
Wing Head #82 Dacrotized	
Part No.	Price
82-12-100-16	
82-12-120-16	

### FLUSH PHILLIPS



82-12-140-16	
82-12-160-16	
82-12-180-16	
82-12-200-16	
82-12-220-16	
82-12-240-16	
82-12-300-16	
82-12-340-16	
Oval Head #85 Stnls Slotted	
Part No.	Price
85-11-100-20	
85-11-140-20	
85-11-160-20	
85-11-180-20	
85-11-200-20	
85-11-220-20	
85-11-240-20	
85-11-260-20	
85-11-280-20	

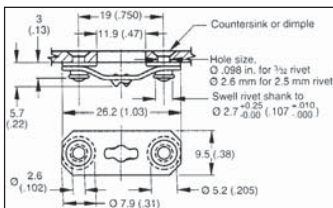
### WING HEAD



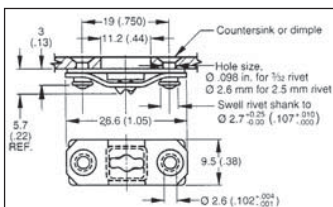
Wing Head #85 Zinc plate, chromate plus sealer	
Part No.	Price
85-11-300-20	
85-12-140-16	
85-12-160-16	
85-12-180-16	
85-12-200-16	
85-12-220-16	
85-12-240-16	
85-12-260-16	
85-12-280-16	
85-12-300-16	
85-12-320-16	
85-12-340-16	
85-12-360-16	
85-12-380-16	
85-12-400-16	

HA

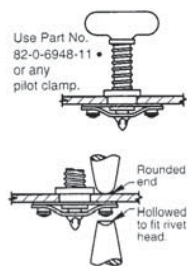
## #82 SOUTHCO RECEPTACLES



**FLOATING FOR RIVETING W/O BASE** - This space saving stainless steel receptacle offers optimum weight savings by eliminating base.  
P/N 82-35-295-20 ..... /ea



**FLOATING FOR RIVETING W/ BASE** - Full-floating dacrotized steel receptacle is mounted to inside panel with two 3/32" rivets. Compact dimensions save space and weight.  
P/N 82-35-302-15 ..... /ea



**FIXED FOR WELDING WITH BASE** - Exactly the same as the receptacle with base above except this receptacle features two welding studs for installation by welding rather than rivets.  
P/N 82-35-303-15 ..... /ea

**CLIP-ON RECEPTACLES** - These versatile receptacles will fit material thickness from .020 to .190 by simply slipping over the hole and clipping in place. Easily removed as well, these receptacles do not require welding or riveting.  
P/N 82-47-113-200 (Stainless Steel) ..... /ea  
P/N 82-47-113-150 (Steel) ..... /ea

**RUBBER VIBRATION ISOLATION RECEPTACLES** - Use these receptacles where it is necessary to isolate vibration between panels.  
P/N 82-35-306-10.....

## #85 RECEPTACLES

**RIVET TYPE** - Receptacle Spring: 1064 steel, dacrotized  
Base: 1010 steel, dacrotized. P/N 85-35-295-15 ..... /ea

**RECEPTACLE SPRING**: 17-7 PH, stainless steel, passivated  
**BASE**: 305 stainless steel, passivated. P/N 85-35-295-20 ..... /ea

**WELD TYPE** - Receptacle Spring: 1064 steel, dacrotized  
Base: 1010 steel, dacrotized Rivet: steel, copper-plated.  
P/N 85-35-296-15 ..... /ea

**CLIP-ON TYPE** - 17-7 PH stainless steel, passivated.  
P/N 85-47-101-20 ..... /ea

## DETERMINING SOUTHCO STUD PART NO.

Stud Length	Selection Chart	Material Thickness	Material Thickness	Material Thickness
Thickness	Size	Thickness	Size	Thickness
.090	.109	100		
.110	.129	120		
.130	.149	140		
.150	.169	160		
.170	.189	180		
.190	.209	200		
.210	.229	220		
.230	.249	240		
.250	.269	260		
.270	.289	280		

Southco studs are commonly used to secure Cessna cowlings, particularly on models 150, 172, and 177. We stock the popular Southco No. 82 1/4 turn fastener studs, receptacles, and accessories.

### TO DETERMINE PART NO.

Select Stud part number using chart above. Example:  
**82 - 14 - 220 - 16**

Southco Fastener Number    Head Type (Slotted)    Stud Length    Material Type (Dacrotized)

**SOUTHCO SEALING WASHER** - This black synthetic washer is used under head of Southco Studs.....P/N 82-43-201-38 ...../ea

**SOUTHCO EJECTOR SPRING** - This stainless steel spring enables the stud head to stand away from the panel when the unit is not fastened. When using the ejector spring, add two grip lengths to stud length to allow for spring and wear washer. ....P/N 43-13-1-24 ...../ea

**SOUTHCO WEAR WASHER** - A plastic washer to reduce wear around the Southco stud. When using wear washer add one grip length to stud length selection. P/N 82-46-101-39 ...../ea.

**SOUTHCO SPLIT RING RETAINER** - Can be installed by hand or tool, and is fabricated from stainless steel. P/N 82-32-101-20 ...../ea

**SOUTHCO SPLIT RING RETAINER TOOL** - Designed to install Southco split ring retainers. P/N 82-0-7596-11 ...../ea

**SOUTHCO PUSH-ON RETAINER** - designed for installation using the retainer tool below. Stainless.....P/N 82-32-201-20 ...../ea  
Plastic.....P/N 82-32-301-12 ...../ea

**SOUTHCO PUSH-ON RETAINER TOOL** - An easy-to-use tool quickly installs Southco push-on retainers .....P/N 82-0-22542-11 ...../ea

## #85 RETAINERS

**Split Ring** Hand or tool installation. Stainless steel.  
P/N 85-34-101-20 ...../ea  
**Push-On Tool** installation only. 302 Stainless Steel, Passivated  
P/N 85-34-201-20 ...../ea  
Nylon Black .P/N 85-34-301-12 ...../ea

## #85 THERMOPLASTIC (CUPPED NYLON) WEAR WASHER

Natural color. Order stud one size longer than size you would use without washer. Adjustment Formula: Add 0.51/.020 to your total material thickness.  
P/N 85-46-101-39 ...../ea

# CLICK BOND FASTENERS

## CLICK BOND FASTENERS

Click Bond Fasteners mount to surfaces with adhesive. They are assembled in a disposable, self-fixturing device of plastic that aligns and holds the fastener in position and under controlled pressure while the bonding material cures. After the installation is completed, the holding fixture is removed and the conventional attachment is made to the fastener. Bonded fasteners eliminate welding or drilling surfaces and result in reinforced substrate strength, leakproof and corrosion resistant attachments. Aircraft Spruce & Specialty Co. offers Click Bond Fasteners in convenient, pre-packaged kits as shown.

### CABLE TIE MOUNT KIT



Each cable tie mount in this kit is pre-assembled in a temporary, easy-to-remove fixture that holds the cable tie mount in place and under pressure while the adhesive cures. No additional installation tools are needed. The kit includes four CB3019AA3N cable tie mounts with nylon ties (5" 40 lbs.), one adhesive packet, surface preparation materials, and instructions.

P/N 04-06000

### FLOATING NUTPLATE KIT



The Click Bond adhesive bonded floating nutplate has a metal base and is installed using a disposable, elastomeric fixture that temporarily holds the nutplate in place and under pressure while the adhesive cures. The fixture prevents fouling of the clearance hole. No additional tools are needed for making the nutplate attachment. This fastener meets or exceeds the standards set by MIL-N-25027 for push-out, torque-out, and cycle life. Bonded nutplates eliminate composite damaging rivets, reinforce the structure, and reduce installation time. The kit includes four CB2009A3S floating nutplates (10-32) with aluminum baseplate, one adhesive packet, surface preparation materials, and instructions.

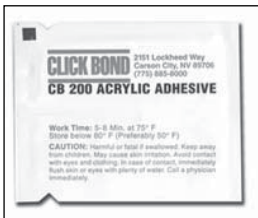
P/N 04-06005 ...../ea.

### REPAIR PATCH KIT



These self-fixturing surface mounted patches repair small holes and fastener leaks without access to the reverse side of the surface. The patches are adhesively bonded to flat or curved surfaces with the aid of an integral, disposable fixture. The high peel strength adhesive allows the patches to withstand supersonic flight, cleaning, de-icing, and paint stripping. Patches can be removed easily with heat application. The kit includes one CP125-000-005A1A1 aluminum repair patch (.005 thick and 1.25 inch diameter), one adhesive packet, surface preparation materials, and instructions.

P/N 04-06015



### CB 200 ACRYLIC ADHESIVE

A high strength, two part adhesive. 3.5 gram package. One package is usually sufficient to do five of any Click Bond fasteners.

P/N 04-06040

### STUD KITS



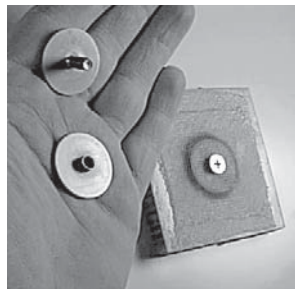
Click Bond studs are available in several sizes. The Metal Small Base Stud Kit includes six CS62-1032-12AX-CR aluminum small base stainless studs, six stainless nylocks/washers (10-32), one adhesive packet, surface preparation materials, and instructions. The Metal Large Base Stud Kit includes four CS125-1420-16AX-CR aluminum large base stainless studs, four stainless nylock/washers (1/4-20), one adhesive packet, surface preparation materials, and instructions. The Fiberglass Base Stud Kit includes two CS125-1032-12G-CR fiberglass large base stainless studs, two stainless nylocks/washers (10-32), one adhesive packet, surface preparation materials, and instructions.

Metal Small Base Stud Kit..... P/N 04-06020.....

Metal Large Base Stud Kit ..... P/N 04-06025.....

Fiberglass Base Stud Kit..... P/N 04-06030.....

### EZ-POINT NUTS & STUDS FOR COMPOSITES



Creating a hard point in a composite laminated structure has never been easier. Simply drill a hole, prep the area, apply structural adhesive to the alodined, cleaned surface of the EZ-Point and snap into place. Simple and clean. For secondary structural applications, apply three plies of bid cloth to the area. Un-glassed samples were tested to failure in excess of 200 lbs. in shear. Glassed samples exceeded testing ability at over 500 lbs. Perfect for Adel clamps, trim and auto pilot servos, hydraulics, anything but primary structure. Available in 8-32, 10-32, 1/4 - 20, 1/4 - 28, your choice of locking, blind and studs. Used extensively in the installation of the Flesher 360 interior for the Lancair.

Available in 8-32, 10-32, 1/4 - 20, 1/4 - 28, your choice of locking, blind and studs. Used extensively in the installation of the Flesher 360 interior for the Lancair.

STUDS			BLIND NUTS			LOCKING NUTS		
THREAD	P/N	\$ EA	THREAD	P/N	\$ EA	THREAD	P/N	\$ EA
8-32	04-06330	.	8-32	04-06350	.	8-32	04-06370	.
10-32	04-06335	.	10-32	04-06355	.	10-32	04-06375	.
1/4 - 20	04-06340	.	1/4 - 20	04-06360	.	1/4 - 28	04-06380	.
						1/4 - 28	04-06385	.

### EZ-POINT STRIPS FOR COMPOSITES



Take the guesswork out of nut plate spacing with EZ-Point Strips. They maintain consistent spacing while remaining flexible enough to conform to curvature. Perfect for cowling attachments, Access doors, removable wingtips, anywhere you would use a standard 10/32 or 8/32 nut plate. Locking threads, available in one, two and three inch centers.

Sold in one-foot sections.

8-32 thread, 1" centers ..... P/N 04-06450 ..... ea.

8-32 thread, 2" centers ..... P/N 04-06455 ..... ea.

8-32 thread, 3" centers ..... P/N 04-06460 ..... ea.

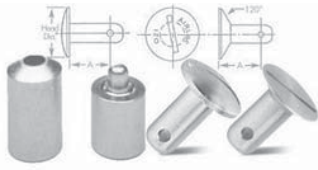
10-32 thread, 1" centers ..... P/N 04-06465 ..... ea.

10-32 thread, 3" centers ..... P/N 04-06475 ..... ea.

HA

# AIRLOC FASTENERS

## A-LOCK (AIRLOC) FASTENERS



A-LOCK fasteners are common to Beechcraft airplanes and latches on many cowlings. The design consists of a simple stud, with a pin pressed into the shank. The pin is installed after inserting the stud through the panel hole and removed

prior to removing the stud. Some installations use a grommet in the fastener hole. Unlike other fasteners, the grommet does not usually require replacement when installing new studs. Base part numbers indicate stud diameter and head style. A-LOCK studs are made in several blank lengths indicated by the first dash number in the charts. Each blank length can have up to 10 second dash numbers or grip sizes. The second dash number indicates the maximum grip range in .010" increments. MilSpec primarily stocks sizes common to Beech aircraft in stainless steel for replacement purposes. To remove an A-LOCK stud, simply clip or remove the pin enough to back the stud out of the hole. New pins are pressed in using special pliers, or by modifying standard vice grip pliers. Drill or cut one jaw of the vice grip to allow proper relief for the pin. If new grommets are required, a flaring tool is necessary (see below). For new installations, cross pins are required.

MS P/N	Our P/N	Size/Head Style	Grip	"A"	Total Length	Price
112060-1-060	04-00931	#2 Flush	.051-.060	.200	.359	.
112060-1-080	04-00933	#2 Flush	.071-.080	.220	.359	.
112060-1-090	04-00934	#2 Flush	.081-.090	.230	.359	.
294186-1-080	04-00936	#5 Flush	.071-.080	.267	.500	.
294186-1-100	04-00937	#5 Flush	.091-.100	.287	.500	.
294186-2-180	04-00938	#5 Flush	.171-.180	.367	.609	.
294186-2-190	04-00939	#5 Flush	.181-.190	.377	.609	.
294186-2-200	04-00940	#5 Flush	.191-.200	.387	.609	.
294186-2-210	04-00941	#5 Flush	.201-.210	.397	.609	.
294186-2-230	04-00942	#5 Flush	.220-.230	.417	.609	.
294186-2-240	04-00943	#5 Flush	.231-.240	.427	.609	.
294186-2-250	04-00944	#5 Flush	.241-.250	.437	.609	.
294290-1-080	04-00945	#5 Round	.071-.080	.267	.500	.
294290-1-090	04-00946	#5 Round	.081-.090	.277	.500	.
294290-2-170	04-00947	#5 Round	.161-.170	.357	.609	.



## AIRLOC CROSS PINS

Series	Description	Part No.	Price
#2	99785-2 Steel	04-01071	.
#2	293274 Stainless	04-01072	.
#5	294185 Stainless	04-01074	.



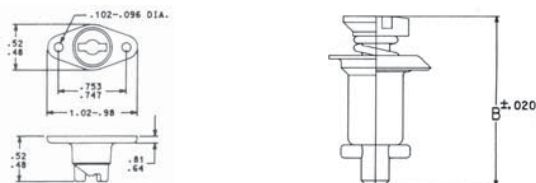
## A-LOCK RECEPTACLES (SOLID RECEPTACLE)

Series	Rivet Spacing	Solid Rec. Plain	Price ea.	Solid Rec. Countersink	Our Part No.	Price ea.
#2	3/4"	99871-P098	Call	99871-C098	04-00951	.
#5	1"	99833-P098	Call	99833-C098	---	Call
		99833-P130	Call	99833-C130	---	Call

## A-LOCK RECEPTACLES (FLOATING RECEPTACLE)

Series	Rivet Spacing	Float. Rec. Plain	Our Part No.	Price ea.	Float. Rec. Countersink	Our Part No.	Price ea.
#2	3/4"	--	--	Call	99967-C098	--	Call
#5	1"	99947-P098	04-00954	.	99947-C098	04-00956	.
		99947-P130	04-00955	.	99947-C130	--	Call

## #2 RECEPTACLE



## BEECH BONANZA COWLING FASTENER CONVERSION KITS

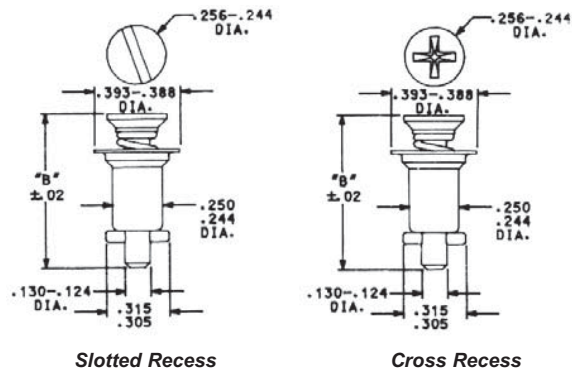


Great looking kits for converting Bonanza cowlings to the Superior MilSpec C-LOCK fasteners. Convert any Bonanza main engine cowling from the original Dzus fasteners to the heavy duty MilSpec 4000 series C-Locks. Convert early Bonanza gill (cheek) panels from Airloc to the MilSpec 2700 series fasteners. Convert later Bonanza gill (cheek) panels to the heavy duty MilSpec 4000 series C-Locks.

All kits are in stainless steel. Slotted or Phillips head options available please specify when ordering. Simple installation. Instructions and tips included with each kit. Main and cheek can be done in less than 5 hours.

Beech Kit No.	Model	Serial No.	Description	Price
B35-2700	33	CD1-350	Gill conversion 2700 series	.
	35	D1-6567	Slotted head (looks original)	.
B35-2700P	33	CD1-350	Gill conversion 27S3 series	.
	35	D1-6567	Phillips head	.
B35-4000S	33	All	Main Cowling Conversion	.
	35	D1-9068	4002 Series Slotted head	.
B35-4000P	33	All	Main Cowling Conversion	.
	35	D1-9068	40S5 Series Phillips head	.
B35-4000GP	33	CD351-on	Gill Conversion	.
	35	D6562-on	4002 Series	.
	36	E1 -on	Phillips head	.

## #2 STUD ASSEMBLY - FLUSH



## A-LOCK GROMMETS

May not require replacement when installing new studs.

Series	Panel Thick.	Flush Head	Part No.	Price
#2	up to .040	295846-1	04-00962	.
	.041-.080	295846-2	04-00963	.
#5	.041-.121	295250-2	04-00964	.
	.122-.201	295250-5	04-00965	.

## FLARING TOOLS FOR A-LOCK GROMMETS

These tools are required for replacing any A-LOCK grommet.

MS P/N	Our P/N	Type	Price
MS29693/29695	04-00959	#2 Flush	.
MS9529/29667	04-00960	#5 Flush	.
MS9529/29770	04-00961	#5 Round	.

HA

# AN FITTINGS

The aircraft fittings shown on the following pages conform to current AN and MS specifications. We stock aluminum, brass and/or steel fittings. Fittings not regularly stocked can be special ordered. Order by Part Number. Example: AN840-8D.



**AN804**  
**TEE,  
FLARED TUBE WITH  
BULKHEAD ON RUN**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	---	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	---	.
12	12D	3/4	1-1/16-12	---	---



**AN815**  
**UNION,  
FLARED TUBE**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	.	.



**AN818**  
**NUT,  
COUPLING**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	.	.

HA



**AN807**  
**ADAPTER  
HOSE TO UNIVERSAL**

Size No.	Hose		Thread Size	Price Each	
	Brass	Alum.		Brass	Alum.
4	4D	1/4	7/16-20	.	.
6	6D	3/8	9/16-18	---	.
8	8D	1/2	3/4-16	---	.



**AN816**  
**NIPPLE,  
FLARED TUBE AND  
PIPE THREAD**

Size No.	Tube		Pipe Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	1/8	.	.
3	3D	3/16	1/8	.	.
4	4D	1/4	1/8	.	.
4-4	4-4D	1/4	1/4	.	.
5	5D	5/16	1/8	.	.
6	6D	3/8	1/4	.	.
6-2	6-2D	3/8	1/8	.	.
6-6	6-6D	3/8	3/8	.	.
7	7D	1/2	1/4	.	.
8	8D	1/2	3/8	.	.
10	10D	5/8	1/2	.	.
12	12D	3/4	3/4	.	.



**AN819  
(MS20819)**  
**SLEEVE,  
COUPLING**

Size No.	Tube		Price Each	
	Steel	Alum.	Steel	Alum.
2	2D	1/8	.	.
3	3D	3/16	.	.
4	4D	1/4	.	.
5	5D	5/16	.	.
6	6D	3/8	.	.
8	8D	1/2	.	.
10	10D	5/8	.	.
12	12D	3/4	.	---



**AN814**  
**PLUG AND BLEEDER,  
SCREW THREAD**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	---	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	---	.
12	12D	3/4	1-1/16-12	.	.



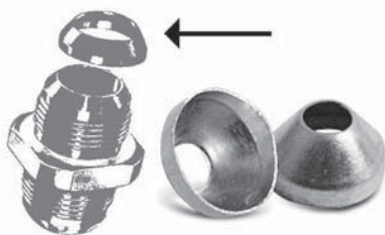
**AN821**  
**ELBOW,  
FLARED TUBE, 90°**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	---	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	---	.



**AN806**  
**FLARED  
TUBE PLUG**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.



## DEL 37° FITTING SEALS

DEL fitting seals are designed to eliminate leakage due to scratches on the sealing surface, improper torquing, or poor finishes on tube ends, in high or low pressure applications. For use with AN, MS, and JIC 37° flared fittings, DEL fitting seals also reduce tube flare cracking by reducing torque needed, eliminating nose damage to the fitting, and allow reuse of hardware. Approved by FAA, NASA, SAE, Air Force, Army, Navy, and major aerospace contractors.

Part Number	Tube Size OD	Fitting Dash Size	Price Each
04-05002	1/8	2	.
04-05003	3/16	3	.
04-05004	1/4	4	.
04-05006	3/8	6	.
04-05008	1/2	8	.
04-05010	5/8	10	.
04-05012	3/4	12	.
04-05016	1	16	.

# AN FITTINGS

HA



**AN822**  
(MS20822)

**ELBOW, FLARED TUBE AND PIPE THREAD, 90°**

Size No.	Tube		Pipe Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	1/8	.	.
3	3D	3/16	1/8	.	.
4	4D	1/4	1/8	.	.
4-4	4-4D	1/4	1/4	.	.
5	5D	5/16	1/8	.	.
6	6D	3/8	1/4	.	.
6-2	6-2D	3/8	1/8	.	.
6-6	6-6D	3/8	3/8	.	.
8	8D	1/2	3/8	.	.
10	10D	5/8	1/2	.	.
12	12D	3/4	3/4	.	.



**AN825**  
(MS20825)

**TEE, FLARED TUBE WITH PIPE THREAD ON SIDE**

Size No.	Tube		Pipe Thread	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	1/8	---	.
3	3D	3/16	1/8	.	.
4	4D	1/4	1/8	.	.
5	5D	5/16	1/8	.	.
6	6D	3/8	1/4	.	.
8	8D	1/2	3/8	---	.
10	10D	5/8	1/2	---	.
12	12D	3/4	3/4	---	---



**AN832**

**UNION, FLARED TUBE, BULKHEAD AND UNIVERSAL**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	.	.



**AN823**  
(MS20823)

**ELBOW, FLARED TUBE AND PIPE THREAD, 45°**

Size No.	Tube		Pipe Thread	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	1/8	.	.
3	3D	3/16	1/8	.	.
4	4D	1/4	1/8	.	.
5	5D	5/16	1/8	.	.
6	6D	3/8	1/4	.	.
8	8D	1/2	3/8	.	.
10	10D	5/8	1/2	---	.
12	12D	3/4	3/4	.	.



**AN826**  
(MS20826)

**TEE TUBE WITH PIPE THREAD ON RUN**

Size No.	Tube		Pipe Thread	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	1/8	.	.
3	3D	3/16	1/8	.	.
4	4D	1/4	1/8	.	.
5	5D	5/16	1/8	.	.
6	6D	3/8	1/4	.	.
8	8D	1/2	3/8	.	.
10	10D	5/8	1/2	.	.
12	12D	3/4	3/4	---	.



**AN833**

**ELBOW, FLARED TUBE BULKHEAD AND UNIVERSAL, 90°**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	---	.
12	12D	3/4	1-1/16-12	---	.



**AN824**

**TEE, FLARED TUBE**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	---	.



**AN827**

**CROSS, FLARED TUBE**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	---	---
3	3D	3/16	3/8-24	---	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	---	.
6	6D	3/8	9/16-18	---	.
8	8D	1/2	3/4-16	---	.
10	10D	5/8	7/8-14	---	---
12	12D	3/4	1-1/16-12	---	.



**AN834**

**TEE, FLARED TUBE, BULKHEAD AND UNIVERSAL**

Size No.	Tube		Thread Size	Price Each	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	---	.
3	3D	3/16	3/8-24	---	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	---	.
12	12D	3/4	1-1/16-12	---	---

# AN FITTINGS

HA



**AN837  
ELBOW,  
FLARED TUBE,  
BULKHEAD AND  
UNIVERSAL 45°**

Size No.	Tube Steel/Alum.	O.D.	Thread Size	Price Each	
				Steel	Alum.
2	2D	1/8	5/16-24	---	---
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	---	---



**AN844  
HOSE ELBOW,  
PIPE THREAD, 45°**

Size No.	Hose Brass/Alum.	I.D.	Pipe Thread	Price Each	
				Brass	Alum.
4	4D	1/4	1/8	.	.
6	6D	3/8	1/4	---	.
8	8D	1/2	3/8	.	.
10	10D	5/8	1/2	.	.



**AN910 COUPLING  
PIPE THREAD**

Size No.	Thread Brass/Alum.	Pipe Size	Price Each	
			Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	.	.
3	3D	3/8	.	.
4	4D	1/2	.	.
6	6D	3/4	.	.



**AN911 NIPPLE  
PIPE THREAD**

Size No.	Pipe Brass/Alum.	Thread Size	Price Each	
			Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	.	.
3	3D	3/8	.	.
4	4D	1/2	.	.
6	6D	3/4	.	.



**AN838  
ELBOW,  
BULKHEAD  
& HOSE TO  
UNIVERSAL, 90°**

Size No.	Hose Brass/Alum.	O.D.	Thread Size	Price Each	
				Brass	Alum.
4	4D	1/4	7/16-20	---	.
6	6D	3/8	9/16-18	---	.



**AN848  
ELBOW,  
HOSE BULKHEAD, 90°**

Size No.	Hose Brass/Alum.	I.D.	Thread Size	Price Each	
				Brass	Alum.
---	4D	1/4	7/16-20	---	.
---	6D	3/8	9/16-18	---	.
---	8D	1/2	3/4-16	---	.



**AN912 BUSHING  
PIPE THREAD REDUCER**

Size No.	Pipe Size	Price Ea.	Size No	Pipe Size	Price Ea.
1D	1/4-1/8	.	8D	3/4-3/8	.
2D	3/8-1/4	.	9D	3/4-1/4	.
3D	3/8-1/8	.	10D	1-3/4	.
4D	1/2-3/8	.	11D	1-1/2	.
5D	1/2-1/4	.	12D	1-3/8	.
6D	1/2-1/8	.	13D	11/4-3/4	.
7D	3/4-1/2	.			



**AN840  
HOSE NIPPLE,  
PIPE THREAD**

Size No.	Hose Brass/Alum.	I.D.	Pipe Size	Price Each	
				Brass	Alum.
4	4D	1/4	1/8	.	.
6	6D	3/8	1/4	.	.
8	8D	1/2	3/8	.	.
---	10D	5/8	1/2	---	.
12	12D	3/4	3/4	.	.



**AN842  
HOSE ELBOW,  
PIPE THREAD, 90°**

Size No.	Hose Brass/Alum.	I.D.	Pipe Thread	Price Each	
				Brass	Alum.
4	4D	1/4	1/8	.	.
6	6D	3/8	1/4	.	.
8	8D	1/2	3/8	---	.
10	10D	5/8	1/2	.	.
12	12D	3/4	3/4	.	.



**AN913 (MS20913) PLUG  
SQUARE HEAD, PIPE THREAD**

Size No.	Pipe Brass/Steel/Alum.	Thread Size	Price Each		
			Brass	Steel	Alum.
1	1S	1D	1/8	.	.
2	2S	2D	1/4	.	.
3	3S	3D	3/8	.	---
4	4S	4D	1/2	.	---
6	6S	6D	3/4	.	---

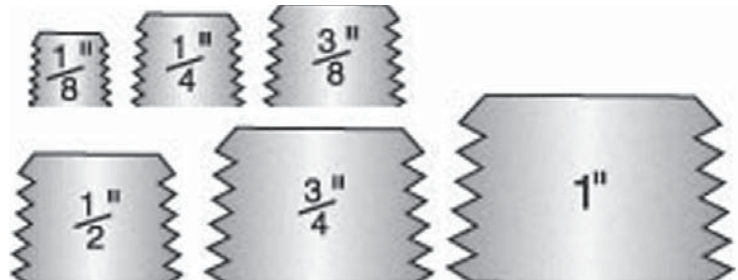
## AN FITTING SIZES



AN Size	Metal Tube O.D.	Thread Size
2	1/8	5/16-24 SAE
3	3/16	3/8-24 SAE
4	1/4	7/16-20 SAE
5	5/16	1/2-20 SAE
6	3/8	9/16-18 SAE
8	1/2	3/4-16 SAE
10	5/8	7/8-14 SAE
12	3/4	1-1/16-12 SAE
16	1"	1-5/16-12 SAE

## NPT FITTING SIZES

Pipe Thread Size	Threads per inch	Theoretical I.D. of Fitting	Closest AN Fitting Size
1/16"	27	1/16"	
1/8"	27	1/8"	4
1/4"	18	1/4"	6
3/8"	18	3/8"	8
1/2"	14	1/2"	10
3/4"	14	3/4"	12
1"	11.5	1"	16
1-1/4"	11.5	1-1/4"	20
1-1/2"	11.5	1-1/2"	24
2"	11.5	2"	



DIAGRAMS MAY NOT BE ACCURATE AND SHOULD NOT BE USED FOR EXACT SIZING. FOR REFERENCE ONLY

# AN FITTINGS



**AN914  
ELBOW,**  
*INTERNAL  
AND EXTERNAL  
PIPE THREAD, 90°*

Size No.		Pipe Thread	Price Each	
Brass	Alum.		Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	.	.
3	3D	3/8	.	.
4	4D	1/2	.	.
6	6D	3/4	---	.



**AN917  
TEE,**  
*INTERNAL,  
PIPE THREAD*

Size No.		Pipe Thread	Price	
Brass	Alum.		Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	.	.
3	3D	3/8	.	.
4	4D	1/2	.	.
6	6D	3/4	---	.



**AN924  
NUT,  
FLARED TUBE, BULKHEAD  
AND UNIVERSAL FITTING**

Size No.	Tube		Thread Size	Price	
	Steel	Alum.		Steel	Alum.
2	2D	1/8	5/16-24	.	.
3	3D	3/16	3/8-24	.	.
4	4D	1/4	7/16-20	.	.
5	5D	5/16	1/2-20	.	.
6	6D	3/8	9/16-18	.	.
8	8D	1/2	3/4-16	.	.
10	10D	5/8	7/8-14	.	.
12	12D	3/4	1-1/16-12	.	.



**AN915  
ELBOW,**  
*INTERNAL  
AND EXTERNAL  
PIPE THREAD, 45°*

Size No.		Pipe Thread	Price	
Brass	Alum.		Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	---	.
3	3D	3/8	.	.
4	4D	1/2	.	.
6	6D	3/4	---	.



**AN918  
CROSS INTERNAL  
PIPE THREAD**

Size #	Pipe Alum. Thread	Price Ea Alum.
1D	1/8	.
2D	1/4	.
3D	3/8	.
4D	1/2	.
6D	3/4	.



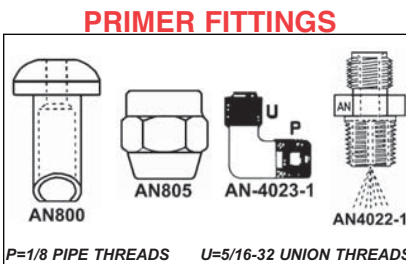
**AN929  
CAP,**  
*FLARED TUBE FITTING*

Size No.	Tube O.D.	Thread Size	Price Each
2D	1/8	5/16-24	.
3D	3/16	3/8-24	.
4D	1/4	7/16-20	.
5D	5/16	1/2-20	.
6D	3/8	9/16-18	.
8D	1/2	3/4-16	.
10D	5/8	7/8-14	.
12D	3/4	1-1/16-12	.



**AN916  
ELBOW,**  
*INTERNAL  
PIPE THREAD, 90°*

Size No.		Pipe Thread	Price	
Brass	Alum.		Brass	Alum.
1	1D	1/8	.	.
2	2D	1/4	.	.
3	3D	3/8	.	.
4	4D	1/2	---	.
6	6D	3/4	---	.



P=1/8 PIPE THREADS U=5/16-32 UNION THREADS

AN No.	Description	Thread	Price
AN780-2	Union Nipple	1/8x5/16-32	.
AN800-2	Union Cone	--	.
AN805-2	Union Nut	5/16-32	.
AN4022-1	Discharge Nipple	1/8x5/16-32	.
AN4023-1	Discharge Elbow	1/8x5/16-32	.



**AN919  
REDUCER,**  
*EXTERNAL THREAD*

Size No.	Tube		Price	
	Steel	Alum.	Steel	Alum.
0	0D	3/16-1/8	.	.
1	1D	1/4-1/8	.	.
2	2D	1/4-3/16	.	.
3	3D	5/16-1/4	.	.
4	4D	3/8-1/8	.	.
5	5D	3/8-3/16	---	.
6	6D	3/8-1/4	.	.
7	7D	3/8-5/16	.	.
8	8D	1/2-1/8	---	.
9	9D	1/2-3/16	---	.
10	10D	1/2-1/4	.	.
11	11D	1/2-5/16	.	.
12	12D	1/2-3/8	.	.

## ALUMINUM MANIFOLD FITTINGS

### ORDERING INFORMATION

Basic part number on all fittings is 04-00XXX, complete the part number by filling in the last 3 digits after selecting the fitting you need according to the details below. Example: 04-00102.

**First Code Number - Determines the style of the fitting.**

- 1: One port in the end with two ports out, 90° cross drilled with one port per side. 3 ports total. Two Mounting Holes.
- 2: One port in the end with four ports out, 90° cross drilled with two ports per side. 5 ports total. Two Mounting Holes.
- 3: One port in the end with six ports out, 90° cross drilled with three ports per side. 7 ports total. Four Mounting Holes.
- 4: One port in the end with eight ports out, 90° cross drilled with four ports per side. 9 ports total. Four Mounting Holes.
- 5: One port in the end with four ports out, 90° drilling with four ports on one side only. 5 ports total. Two Mounting Holes.

**Second Code Number - Determines the style of porting.**

- 0: All the ports are the same.
- 1: Inlet port is one size larger than outlet ports.
- 2: Inlet port is two sizes larger than outlet ports.

**Third Code Number - Determines the inlet port size.**

- 2: 1/8-27 taper pipe thread (NPT)
- 4: 1/4-18 taper pipe thread (NPT)
- 6: 3/8-18 taper pipe thread (NPT)
- 8: 1/2-14 taper pipe thread (NPT)

In the example above - 04-00102, this would be a 1/8 NPT inlet with two outlets of the same size.

Ex.-04-00326, this would have a 3/8 NPT inlet w/six 1/8 NPT outlets.



Our aluminum manifold fittings are a bolt-on design with taper pipe threads. These fittings are designed to provide a convenient means of plumbing multiple hoses from and/or to one source with the fitting being bolted to a supporting structure. This design will eliminate Adel clamps at the juncture of the hoses and eliminate additional tee type fittings when more than two hoses are to be connected to one source. Applications include brake reservoir lines, static system, suction systems, fuel systems, air line pigs, smoke systems, and more. Not for use on oxygen systems or pressures over 150 psi.

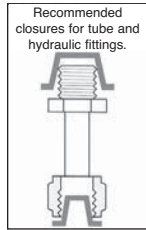
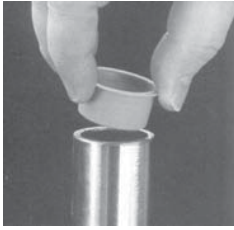
Part No.	Price
04-00102	.
04-00104	.
04-00106	.
04-00108	.
04-00114	.
04-00116	.
04-00118	.
04-00126	.
04-00128	.
04-00202	.
04-00204	.
04-00206	.
04-00208	.

Part No.	Price
04-00214	.
04-21600	.
04-21800	.
04-00226	.
04-00228	.
04-00302	.
04-00304	.
04-00306	.
04-00308	.
04-00314	.
04-00316	.
04-00318	.
04-00326	.

Part No.	Price
04-00328	.
04-00402	.
04-00404	.
04-00414	.
04-00416	.
04-00426	.
04-00428	.
04-00502	.
04-00504	.
04-00514	.
04-00516	.
04-00526	.
04-00528	.

# CAPPLUGS

## T SERIES CAPPLUGS (NON-THREADED)



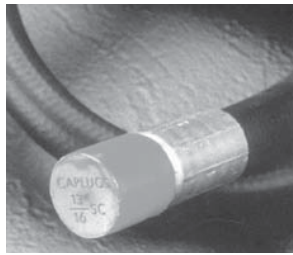
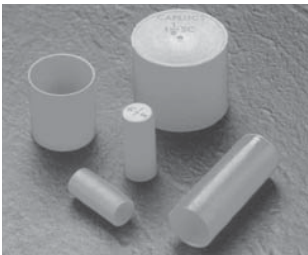
Tapered Capplugs can be used as either caps or plugs. Because they are tapered in design and made from highly pliable (or flexible) Polyethylene, they can be applied to fit snugly and are readily removable, whether used for capping or plugging. Especially recommended for use on MIL Std. and SAE-type tube and hydraulic fittings and for threaded external and internal NPT fittings.

Part No.	Dash No.	Tubing O.D.	Thread	Capplugs As Plugs	Capplugs As Caps	Price Each
04-00045	-2	1/8	5/16-24	1	2	.
04-00046	-3	3/16	3/8-24	2	3-X	.
04-00047	-4	1/4	7/16-20	3	4-X	.
04-00048	-5	5/16	1/2-20	4	5	.
04-00049	-6	3/8	9/16-18	5	6-X	.
04-00050	-8	1/2	3/4-16	8	9-X	.
04-00051	-10	5/8	7/8-14	10	11-X	.
04-00052	-12	3/4	1 1/16-12	12-X	13-X	.
04-00053	-16	1	1 5/16-12	14-X	15-X	.

Less 20% Discount on 50 Capplugs (Same P/N)

HA

## SC SERIES CAPPLUGS (NON-THREADED)

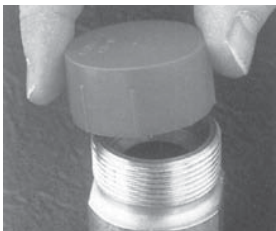


Series SC sleeve caps are designed to fit outside diameters of tubing sizes listed with a snug friction grip. Available in 57 different O.D.'s and lengths. Ideal for capping and protecting both threaded and non-threaded tubing or rod ends. They also make excellent masks, for painting, plating or grit-blasting operations.

Part No.	Caplug No.	A		B		Price Ea.
		To fit tube O.D. Inches	To fit tube O.D. mm	Inside Length Inches	Inside Length mm	
04-00054	SC-1/8	1/8	3.18	.59	14.99	.
04-00055	SC-3/16-5	3/16	4.76	.35	8.89	.
04-00056	SC-3/16-16	3/16	4.76	1.00	25.40	.
04-00057	SC-1/4-4	1/4	6.35	.22	5.59	.
04-00058	SC-1/4-14	1/4	6.35	.88	22.35	.
04-00059	SC-5/16	5/16	7.94	.88	22.35	.
04-00060	SC-3/8	3/8	9.53	.88	22.35	.
04-00061	SC-7/16-14	7/16	11.11	.88	22.35	.
04-00062	SC-1/2-8	1/2	12.70	.50	12.70	.
04-00063	SC-1/2-14	1/2	12.70	.88	22.35	.
04-00064	SC-9/16-9	9/16	14.29	.56	14.22	.
04-00065	SC-9/16-14	9/16	14.29	.88	22.35	.
04-00066	SC-5/8	5/8	15.88	.88	22.35	.
04-00067	SC-3/4	3/4	19.05	.88	22.35	.
04-00068	SC-7/8	7/8	22.23	.88	22.35	.
04-00069	SC-1	1	25.40	1.00	25.40	.

Less 20% Discount on 50 Capplugs (Same P/N)

## CD SERIES CAPPLUGS (THREADED)

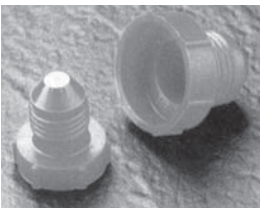


Knurled for ease of application, Series CD caps seal flared JIC fittings exceptionally well against dirt and moisture, as well as for masking during dipping, painting and plating.

Part No.	Caplug No.	To Cap Normal Tubing Size Inches	To fit Thread	Dim A		No. of Knurls	Price Each
				In	mm		
04-00032	CD-3	3/16	3/8-24	.47	11.94	4	.
04-00033	CD-4	1/4	7/16-20	.47	11.94	4	.
04-00034	CD-5	5/16	1/2-20	.47	11.94	6	.
04-00035	CD-6	3/8	9/16-18	.53	13.46	6	.
04-00036	CD-6A	3/8	5/8-18	.53	13.46	6	.
04-00037	CD-8	1/2	3/4-16	.57	14.48	6	.
04-00038	CD-10	5/8	7/8-14	.68	17.27	6	.
04-00039	CD-11	-	1-14	.78	19.81	8	.
04-00040	CD-12	3/4	1 1/16-12	.75	19.05	8	.

Less 20% Discount on 50 Capplugs (Same P/N)

## PD SERIES CAPPLUGS (THREADED)



Series PD Plugs, designed for use on flared JIC fittings, are knurled for ease of application. They will seal low pressure requirements with light finger tightening. PD plugs can be used to seal 37° flare fittings without gaskets.

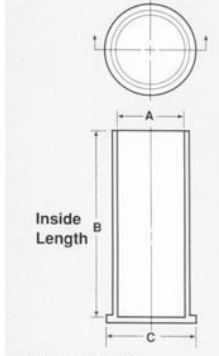
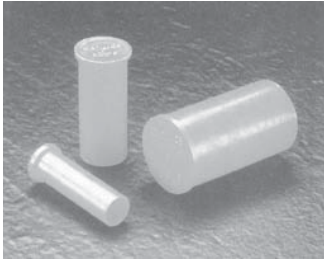
Part No.	Caplug No.	To Plug Nominal Tubing Size	To fit Thread	Dimensions				Price Each	
				B		C			D
				in	mm	in	mm	in	mm
04-00023	PD-30	3/16	3/8-24	.46	11.68	.50	12.70	.18	4.57
04-00024	PD-40	1/4	7/16-20	.53	13.46	.62	15.75	.19	4.83
04-00025	PD-50	5/16	1/2-20	.53	13.46	.68	17.27	.25	6.35
04-00026	PD-60	3/8	9/16-18	.50	12.70	.81	20.57	.25	6.35
04-00027	PD-65	3/8	5/8-18	.59	14.99	.81	20.57	.25	6.35
04-00028	PD-80	1/2	3/4-16	.75	19.05	.94	23.88	.25	6.35
04-00029	PD-100	5/8	7/8-14	.87	22.10	1.06	26.93	.25	6.35
04-00030	PD-121	3/4	1-1/16-14	1.12	28.45	1.31	33.28	.25	6.35
04-00031	PD-160	1	1-5/16-12	.93	23.62	1.50	38.10	.25	6.35

Less 20% Discount on 50 Capplugs (Same P/N)



# CAPPLUGS

## RCL SERIES CAPPLUGS (UNTHREADED)



MATERIAL COLOR:  
Low Density Polyethylene/Red

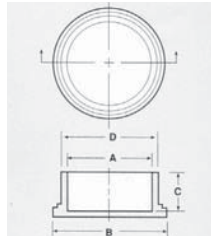
Series RCL caps are ideal for protecting threaded or smooth cylindrical surfaces. Originally designed for use on hydraulic double threaded bulkhead fittings, they are especially suitable where greater longitudinal protection is required.

**Less 20% Discount on 50 Capplugs (Same P/N)**

Part No.	Caplug No. (formerly series B-203)	A To Cap Thread Size In.	B Inside Length		C		Price Each
			In	mm	in	mm	
04-00079	RCL-2	5/16	1.24	31.50	.46	11.68	.
04-00080	RCL-3	3/8	1.24	31.50	.52	13.21	.
04-00009	RCL-4	7/16	1.33	33.78	.58	14.73	.
04-00011	RCL-5	1/2	1.33	33.78	.64	16.26	.
04-00012	RCL-6	9/16	1.41	35.82	.70	17.78	.
04-00013	RCL-8	3/4	1.56	39.63	.88	22.35	.
04-00014	RCL-9	M-20 (.787)	1.56	39.63	.91	23.11	.
04-00015	RCL-10	7/8	1.70	43.18	1.01	25.66	.
04-00016	RCL-12	1 1/16	1.89	48.01	1.19	30.23	.

HA

## EC SERIES CAPPLUGS (UNTHREADED)

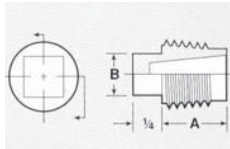


Static dissipative EC Series Capplugs provide positive ESD and physical protection for all common sizes of threaded electrical and electronic connectors. Also suitable for protecting non-threaded bayonet-type connectors.

**Less 20% Discount on 50 Capplugs (Same P/N)**

Part No.	Caplug No.	A-Caps Nominal Thread Size In.	Dimensions				Price Each
			B		C		
			In	mm	in	mm	
04-00070	EC-4	1/4	.48	12.19	.50	12.70	.
04-00071	EC-5	5/16	.55	13.97	.56	14.22	.
04-00072	EC-6	3/8	.62	15.75	.50	12.70	.
04-00073	EC-8	1/2	.74	18.79	.50	12.70	.
04-00074	EC-9	9/16	.78	19.81	.44	11.18	.
04-00075	EC-10	5/8	.84	21.34	.50	12.70	.
04-00076	EC-12	3/4	.97	24.63	.50	12.70	.
04-00077	EC-14	7/8	1.12	28.44	.50	12.70	.
04-00078	EC-16	1	1.22	30.98	.50	12.70	.

## P SERIES CAPPLUGS (THREADED)

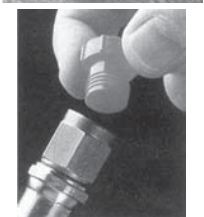
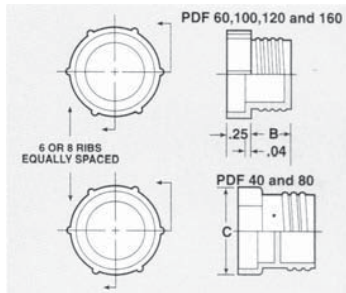
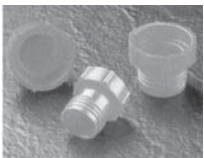


Series P pipe plug are available in two styles: square head, and round head. They are molded in high density polyethylene and are ideal for keeping moisture, dirt and other contaminants from NPT-threaded ports.

**Less 20% Discount on 50 Capplugs (Same P/N)**

Part No.	Caplug No.	To Fit	Dimensions						Price Each
			A		B		C		
			in	mm	in	mm	in	mm	
04-00041	P-18	1/8" NPT	.44	11.18	.28	7.11	-	-	.
04-00042	P-28	1/4" NPT	.50	12.70	.37	9.40	-	-	.
04-00043	P-38	3/8" NPT	.56	14.22	.44	11.18	-	-	.
04-00044	P-48	1/2" NPT	.59	14.99	.56	14.22	-	-	.

## PDF SERIES CAPPLUGS (THREADED)

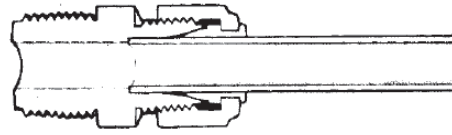
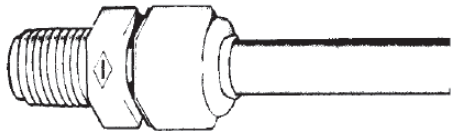


Series PDF plugs are designed for easy mechanical or hand installation on flat-faced O-ring fittings.

Part No.	Caplug No.	To Plug Nominal Tubing Size	To Fit Thread Size	Dimensions				Price Each
				B		C		
				in	mm	in	mm	
04-00018	PDF-60	3/8"	11/16-16	.44	11.18	.87	22.10	.
04-00019	PDF-80	1/2"	13/16-16	.50	12.70	.94	23.88	.
04-00020	PDF-100	5/8"	1-14	.59	14.99	1.16	29.47	.
04-00021	PDF-120	3/4"	13/16-12	.63	16.00	1.33	33.78	.
04-00022	PDF-160	1"	17/16-12	.75	19.05	1.63	41.40	.

**Less 20% Discount on 50 Capplugs (Same P/N)**

# NYLO-SEAL FITTINGS



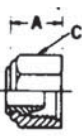
Nylo-Seal tube fittings are exceptionally strong. The bodies, made of nylon, are stronger than machined fittings of similar composition. They are furnished complete with nut/sleeve assemblies, made of acetal copolymer. Since the sleeve snaps into and is retained by the nut there is no fumbling for a loose sleeve. Just insert tube into the fitting and tighten the nut 2 to 2-1/2 full turns.

**Note:** The most frequently used combination of tube and pipe sizes are 1/4" Tube x 1/8" Pipe and 3/8" Tube x 1/4" Pipe.

## 259-P CAP, 259-N INSERT (NYLON) SLEEVE ASSEMBLY

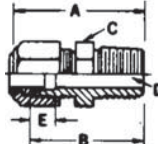


Tube O.D.	A	D
259-N 1/4	3/8	1/8
259-P 3/8	7/16	13/64



Tube O.D.	Thd.	A	C
1/4	7/16-20	15/32	9/16
3/8	5/8-20	3/4	3/4

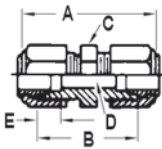
## 268-N MALE CONNECTOR



Tube O.D.	Pipe Thd.	A	B	C	D	E
1/4	1/8	1-13/64	1	5/8	15/64	15/32
1/4	1/4	1-25/64	1-3/16	5/8	15/64	11/16
3/8	1/4	1-17/32	1-21/64	13/16	5/16	19/32
3/8	3/8	1-19/32	1-25/64	13/16	11/32	19/32

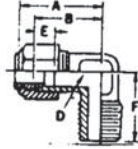
HA

## 262-N UNION



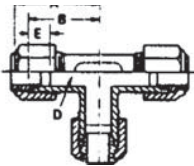
Tube O.D.	A	B	C	D	E
1/4	1-25/64	63/64	5/8	7/32	15/32
3/8	1-21/32	1-1/4	13/16	23/64	19/32

## 269-N MALE ELBOW



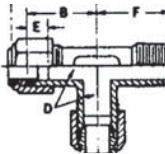
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	1-1/64	13/16	7/32	3/8	27/32
1/4	1/4	1-1/64	13/16	13/32	3/8	1-1/32
3/8	1/4	1-9/64	15/16	5/16	7/16	1-1/32
3/8	3/8	1-9/64	15/16	11/32	7/16	1-3/32

## 264-N UNION TEE



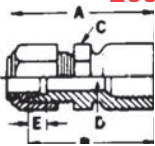
Tube O.D.	A	B	D	E
1/4	1-9/64	47/64	7/32	15/32
3/8	1-11/64	31/31	11/32	19/32

## 271-N MALE RUN TEE



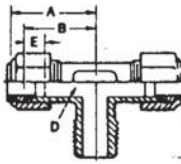
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	59/64	21/32	7/32	15/32	3/4
1/4	1/4	59/64	13/32	7/32	15/32	29/32
3/8	1/4	1-5/32	61/64	5/16	19/32	1-1/16
3/8	3/8	1-3/16	61/64	23/64	19/32	1-7/64

## 266-N FEMALE CONNECTOR



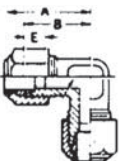
Tube O.D.	Pipe Thd.	A	B	C	D	E
1/4	1/8	1-9/64	15/16	9/16	7/32	9/16
1/4	1/4	1-5/16	1-7/64	11/16	7/32	47/64
3/8	1/4	1-27/64	1-7/32	11/16	11/32	3/4
3/8	3/8	1-27/64	1-7/32	13/16	11/32	3/4

## 272-N MALE BRANCH TEE



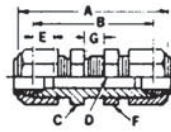
Tube O.D.	Pipe Thd.	A	B	D	E	F
1/4	1/8	15/16	47/64	7/32	15/32	3/4
1/4	1/4	15/16	47/64	7/32	15/32	13/16
3/8	1/4	1-11/64	31/32	5/16	19/32	1-1/16
3/8	3/8	1-11/64	31/32	23/64	19/32	1-7/64

## 265-N ELBOW UNION



Tube O.D.	A	B	D	E
1/4	1-1/64	13/16	7/32	3/8
3/8	1-5/32	15/16	11/32	7/16

## 282-N BULKHEAD UNION



Tube O.D.	Pipe Thd.	A	B	C	D	E	F	G
1/4	7/16-20	1-57/64	1-31/64	5/8	7/32	15/32	5/8	5/16
3/8	5/8-20	2-1/4	1-53/64	13/16	11/32	19/32	7/8	3/8

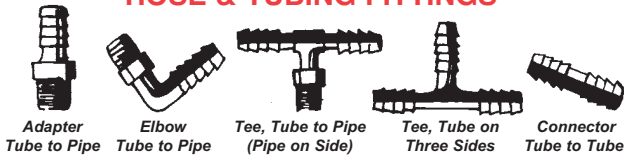
\*Use 259-N inserts with all Poly-Flo tubing connections. Not needed with Nylo-Seal tubing.

Part No.	Tube Size In.	Price Each	Part No.	Size (In) Tube Pipe	Price Each	Part No.	Size (In) Tube Pipe	Price Each
259-N 04	1/4	.	266-N 04 x 02	1/4 x 1/8	.	271-N 04 x 02	1/4 x 1/8	.
259-N 06	3/8	.	266-N 04 x 04	1/4 x 1/4	.	271-N 04 x 04	1/4 x 1/4	.
259-P 04	1/4	.	266-N 06 x 04	3/8 x 1/4	.	271-N 06 x 04	3/8 x 1/4	.
259-P 06	3/8	.	266-N 06 x 06	3/8 x 3/8	.	271-N 06 x 06	3/8 x 3/8	.
261-N 04	1/4	.	268-N 04 x 02	1/4 x 1/8	.	272-N 04 x 02	1/4 x 1/8	.
261-N 06	3/8	.	268-N 04 x 04	1/4 x 1/4	.	272-N 04 x 04	1/4 x 1/4	.
262-N 04	1/4	.	268-N 06 x 04	3/8 x 1/4	.	272-N 06 x 04	3/8 x 1/4	.
262-N 06	3/8	.	268-N 06 x 06	3/8 x 3/8	.	272-N 06 x 06	3/8 x 3/8	.
264-N 04	1/4	.	269-N 04 x 02	1/4 x 1/8	.	282-N 04	1/4	.
264-N 06	3/8	.	269-N 04 x 04	1/4 x 1/4	.	282-N 06	3/8	.
265-N 04	1/4	.	269-N 06 x 04	3/8 x 1/4	.	----	----	----
265-N 06	3/8	.	269-N 06 x 06	3/8 x 3/8	.	----	----	----

Less 10% on 50 pieces per size, Less 20% on 100 pieces per size

# HOSE FITTINGS – PIPE FITTINGS

## HOSE & TUBING FITTINGS



Hose and tubing Insert Fittings are available in high density polyethylene or Nylon. Use polyethylene fittings with Tygon, nylon or soft rubber tubing to assemble low pressure instrument lines such as airspeed pitot and static lines. Use Nylon fittings in gravity-feed fuel lines and engine breather lines.

Fitting Type	Size	Polyethylene		Nylon	
		Part No.	Price Each	Part No.	Price Each
<b>ADAPTER</b> Tube to pipe	3/16Tx1/8P	0700-150	.	0701-150	.
	1/4Tx1/8P	0700-153	.	0701-153	.
	5/16Tx1/8P	0700-156	.	0701T-15	.
	3/8Tx1/8P	0700-158	.	0701-158	.
	1/4Tx1/4P	0700-110	.	0701-110	.
<b>ELBOW</b> Tube to Pipe	3/8Tx1/4P	0700-162	.	0701-162	.
	1/4Tx1/8P	0710-153	.	0711-153	.
	3/8Tx1/8P	0710-158	.	0711-158	.
<b>Tube to Tube</b>	1/4Tx1/4P	0710-110	.	0711-110	.
	3/8Tx1/4P	0710-162	.	0711-162	.
	1/4Tx1/4T	0710-015	.	0711-015	.
<b>REDUCING CONNECTOR</b>	3/8Tx3/8T	0710-020	.	0711-020	.
	1/4Px1/8P	0725-153	.	0726-153	.
<b>TEE</b> Tube to pipe	3/8Px1/8P	0725-161	.	0726-161	.
	3/8Px1/4P	0725-162	.	0726-162	.
	1/4Tx1/4Tx1/8P	0715-153	.	0716-153	.
<b>TEE</b> All Tube	3/8Tx3/8Tx1/4P	0715-162	.	0716-162	.
	1/4Tx1/4Tx1/4P	0715-110	.	0716-110	.
	3/16Tx3/16Tx3/16T	0715-011	.	0716-011	.
<b>CONNECTOR</b> Tube to Tube	1/4Tx1/4T	0705-015	.	0706-015	.
	3/8Tx3/8T	0705-020	.	0706-020	.

## HERBIE CLIP HOSE CLAMPS



The Herbie Clip hose clamp is the original double toothed (double row of teeth) ratchet clamp. This makes the Herbie clip twice as strong (up to 200psi depending on hose work and spigot) as similar hose clamps with a single row of teeth.

The Herbie Clip hose clamp combines its high strength with other key features such as: non-corrosive and resistant to many chemicals, simple to install can be fitted before or after the hose is in place, minimum leak path, lightweight, easy to use (no sharp edges to cut the operators), fully compliant with ROHS, UL listed (nylon 6.6.)

CLIP SIZE	MIN. DIA. (in)	MAX DIA. (in)	PART NO.	PRICE
A	.22	.26	05-02698	.
AA	.26	.31	05-02699	.
B	.31	.36	05-02701	.
C	.40	.47	05-02702	.
CC	.44	.51	05-02695	.
D	.47	.54	05-02703	.
E	.52	.59	05-02704	.
F	.59	.67	05-02705	.
G	.67	.75	05-02706	.
H	.71	.81	05-02696	.
J	.80	.91	05-02707	.
K	.87	.98	05-02708	.

## HERBIE CLIP HOSE CLAMP TOOLS



**INSTALLATION TOOL**  
Recommended for medium volume use.  
Fits sizes A to K.  
P/N.....05-02709 .....

### REMOVAL TOOL

It is easy to install and remove using a choice of manual.  
P/N.....05-02710 .....



## BRASS POLY-FLO FITTINGS

Poly-Flo Pressureless tube fittings consist of a brass body, nut and sleeves. Use with PolyFlo, PVC or Nylaflo pressure tubing. The Poly-Flo fittings have the same configuration as Nylo-Seal fittings of the same basic part number.

261UB - NUT WITH SLEEVE			
Tube O.D.	Thread Size	Part Number	Price Each
1/8	5/16-24	261UB-02	.
3/16	3/8-24	261UB-03	.
1/4	3/8-24	261UB-04	.

262P - UNION			
Tube O.D.	Thread Size	Part Number	Price Each
1/8	--	262P-02	.
3/16	--	262P-03	.
1/4	--	262P-04	.

264P - UNION TEE			
Tube O.D.	Thread Size	Part Number	Price Each
3/16	--	264P-03	.
1/4	--	264P-04	.

266P - FEMALE CONNECTOR			
Tube O.D.	Pipe Thread	Part Number	Price Each
1/8	1/8	266P-02x02	.
3/16	1/8	266P-03x02	.

268P - MALE CONNECTOR			
Tube O.D.	Pipe Thread	Part Number	Price Each
1/8	1/8	268P-02x02	.
3/16	1/8	268P-03x02	.
1/4	1/8	268P-04x02	.

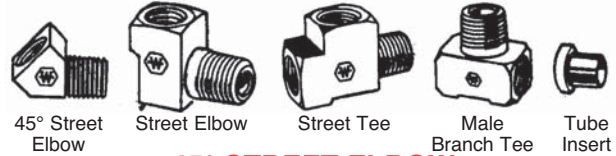
269P - MALE ELBOW			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	269P-03x02	.
1/4	1/8	269P-04x02	.

270P - FEMALE ELBOW			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	270P-03x02	.

272P - MALE BRANCH TEE			
Tube O.D.	Pipe Thread	Part Number	Price Each
3/16	1/8	272P-03x02	.

## WEATHERHEAD BRASS PIPE FITTINGS

These brass elbows and tees provide flexibility in the routing of lines which terminate in male pipe threads.



### 45° STREET ELBOW

Part Number	Pipe Thread	Price Each
3350x2	1/8	.
3350x4	1/4	.
3350x6	3/8	.

### 90° STREET ELBOW

Part Number	Pipe Thread	Price Each
3400x2	1/8	.
3400x4	1/4	.
3400x6	3/8	.

### MALE BRANCH TEE

Part Number	Pipe Thread	Price Each
3600x2	1/8	.
3600x4	1/4	.
3600x6	3/8	.

### STREET TEE

Part Number	Pipe Thread	Price Each
3750x2	1/8	.
3750x4	1/4	.
3750x6	3/8	.

## MISC. WEATHERHEAD BRASS FITTINGS

Part No.	Description	Size	Price Each
2030-4	Tube Insert*	1/8ODx3/32ID	.
3220x4x2	Bushing	1/8FPx1/4MP	.
6100x2	Nut	1/8T	.
6200x2	Male Connector	1/8Tx1/8P	.
66x2	Fml Connector	1/8Tx1/8P	.

\* Used for Long-EZ brake fittings.

## WEATHERHEAD BARB-TITE REUSABLE HOSE ENDS

Designed for use with hoses with maximum working pressure up to 250 PSI. Easy to assemble and disassemble.

Part No.	Description	Hose I.D.	Pipe Size	Cut-off Factor	Price Each
10006B-102	Straight Pipe	3/8"	1/8"	1-1/2	.
10006B-104		3/8"	1/4"	1-1/2	.
10006B-106		3/8"	3/8"	1-11/16	.
10006B-C02	90° Pipe	3/8"	1/8"	3/8	.
10006B-C04		3/8"	1/4"	3/8	.

## BRASS TUBE FITTINGS

Description	Part No.	Price
Brass Tube Fitting 3/8 inch Pipe x 3/8 inch	04-00833	.
Brass Tube Fitting 1/4 inch Pipe x 3/8 inch	04-00834	.

HA