

AIRCRAFT LIGHTING

4-PIN MOLEX CONNECTOR



DESCRIPTION	PART #
4-PIN KIT	KIT-0061

AEROLED EQUINOX

AeroLEDs SunSpot 36 Equinox is a true dual-function LED Landing AND Taxi light. In landing mode, it will output a 20°X20° bright white beam angle for high-speed take-offs and landings to greatly improve visibility both on the ground and in the air from up to 30 miles away. While in taxi mode, the light produces a wider 20°X45° beam spread that outputs a solid and evenly distributed light pattern for unmatched illumination of the runway/taxiway without impairing the vision of other pilots. All lights in the SunSpot Equinox Series come standard with integrated Pulse or WigWag feature. The SunSpot 36 Equinox replacement LED's utilize the existing PAR36 mount and electrical connections.



VOLTAGE	PART #
12 VOLT	EQUINOX-12
24 VOLT	EQUINOX-24

AEROSUN

AeroSun™ is a wing or frame mounted LED landing light with an integrated Pulse or "WigWag" feature that significantly increases recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while drawing half the current. This light is ideal for installations in aluminum aircraft/composite aircraft, where some airflow within the wing cutout exists.



- Power consumption: 39 watts max
- Higher color temperature – White
- Built-in pulse Mode

VOLTAGE	PART #
9-40	AEROSUN

AEROSUN MOUNT KIT

The AeroSun mount kit is useful for mounting AeroLED's AeroSun LED Landing and Taxi light.



DESCRIPTION	PART #
MOUNT KIT	KIT-0012

AEROSUN-VX

AeroSun™ VX Landing and Taxi Light is designed specifically for Vans RV wingtips. In addition to its standard operation as a landing/taxi light, the AeroSun™ VX features integrated Pulse or "WigWag" significantly increasing recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while drawing half the current. Ideal for installations in aluminum aircraft/composite aircraft, where some airflow within the wing cutout exists.



- Power consumption: 60 watts per light max
- Higher color temperature – White
- Built-in pulse mode

VOLTAGE	PART #
9-40	AEROSUN-VX

MICROSUN

The ultra-powerful MicroSun™ LED is very versatile, with the ability to be mounted almost anywhere on an aircraft. In addition to its standard operation as a landing and taxi light, the MicroSun™ features integrated Pulse or "WigWag" significantly increasing recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while drawing half the current. Their compact profile makes them the perfect option for lighter weight Experimental or Kit planes.



- Power consumption: 24 watts max
- Higher color temperature – White
- Built-in pulse mode

VOLTAGE	STYLE	PART #
9-40	EXTERNAL MOUNT	MICROSUN-E
9-40	INTERNAL MOUNT	MICROSUN-I

NANO E SERIES

The NANO™ E redefines compact aviation lighting, delivering exceptional performance in our smallest footprint yet. Currently offered exclusively for experimental aircraft, the NANO™ E offers up to three powerful lighting functions for enhanced safety and visibility.



VOLTAGE	DC	SIDE	POSITION	PART #
14		LEFT	NO	NANO-ENS-12L
14		RIGHT	NO	NANO-ENS-12R
28		LEFT	NO	NANO-ENS-24L
28		RIGHT	NO	NANO-ENS-24R
14		LEFT	YES	NANO-ESP-12L
14		RIGHT	YES	NANO-ESP-12R
28		LEFT	YES	NANO-ESP-24L
28		RIGHT	YES	NANO-ESP-24R

POLARIS POSITION LIGHT BULB

Polaris™ Position Light Bulb serves as an LED replacement for traditional incandescent position lighting. They are to be installed behind a green or red forward-facing navigation lens.



- 12V and 24V
- Power consumption: 7 watts max
- Simple drop-in replacement. (Bay 15s)
- Approvals: FAA-PMA

VOLTAGE	PART #
12 VOLT	POLARIS 12V
24 VOLT	POLARIS 24V

PULSAR 600 SERIES

The Pulsar 600 Series (formerly Pulsar) offers a three-in-one solution with Navigation, Strobe, and Position functionality. Pulsar 600 is a direct LED replacement for the legacy 600 series aircraft Navigation lights with FAA-TSOA/STC and Experimental options available.



VOLTAGE	TYPE	PART #
<u>EXPERIMENTAL</u>		
12 VOLT	LEFT (RED)	PULSAR600EXP-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR600EXP-R-12V
<u>CERTIFIED</u>		
12 VOLT	LEFT (RED)	PULSAR600TSO-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR600TSO-R-12V
24 VOLT	LEFT (RED)	PULSAR600TSO-L-24V
24 VOLT	RIGHT (GREEN)	PULSAR600TSO-R-24V

PULSAR 650 SERIES

Pulsar 650 LED Navigation Light (formerly Pulsar NS) serves as a two-in-one light—a navigation light for directional red and green positioning, and a strobe light to increase visibility in both daylight and night flight. Designed with an industry-standard mounting footprint, an aerodynamically low drag profile, standard three-position mounting screw pattern with a patented mounting bracket. They are ideal for replacing legacy light installations. The lights meet or exceed TSO C-30c, Type I, II, and C-96a, Class II.



- 12V and 24V
- No external power supply needed
- Low power consumption
- Strobe synchronization available
- Easy installation

VOLTAGE	TYPE	PART #
<u>EXPERIMENTAL</u>		
12 VOLT	LEFT (RED)	PULSAR650EXP-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR650EXP-R-12V
24 VOLT	LEFT (RED)	PULSAR650EXP-L-24V
24 VOLT	RIGHT (GREEN)	PULSAR650EXP-R-24V
<u>CERTIFIED</u>		
12 VOLT	LEFT (RED)	PULSAR650TSO-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR650TSO-R-12V
24 VOLT	LEFT (RED)	PULSAR650TSO-L-24V
24 VOLT	RIGHT (GREEN)	PULSAR650TSO-R-24V

AIRCRAFT LIGHTING

PULSAR NS CESSNA WINGTIP FAIRING ADAPTER

AeroLEDs Pulsar NS Cessna Wingtip Fairing Kit was designed for installation on original Cessna wingtips. The fairings are provided oversized and will need to be cut/trimmed and painted before installing on the wingtip. The fairing kit includes a left and right fairing along with all necessary screws and nuts for installation. This fairing kit was designed for use with the following Pulsar NS models:



11-1280-B-12, 11-1280-B-24
AeroLEDs Pulsar NS Cessna Wingtip Fairing Kit fits the following aircraft models: 150L, 150M, 152, 172L, 172M, 172N, 172Q, 172R, 172S, 172RG, 177B, 177RG, 180H, 180J, 180K, 182N, 182P, 182Q, 182R, 182S, 182T, T182T, R182, A185F, 185E, U206F, U206G, TU206F, TU206G, 210K, T210K, 210L, T210L, 210M, T210M, 210N, T210N, P210N, 210R, T210R, P210R

DESCRIPTION	PART #
FAIRING KIT	KIT-01-1091

PULSAR-NSP-EXP

Pulsar 660 LED Navigation Light (formerly Pulsar NSP) serves as a three-in-one light—a navigation light for directional red and green positioning, a strobe light increases visibility in both daylight and night, and a rear-facing white position light. Designed with an industry-standard mounting footprint, an aerodynamically low drag profile, standard three-position mounting screw pattern with a patented mounting bracket, they are ideal for replacing legacy light installations. The lights meet or exceed TSO C-30c, Type I, II and III, and C-96a, Class II.



- 12V and 24V
- No external power supply needed
- Low power consumption
- Strobe synchronization available
- Easy installation

VOLTAGE	TYPE	PART #
<u>EXPERIMENTAL</u>		
12 VOLT	LEFT (RED)	PULSAR660EXP-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR660EXP-R-12V
24 VOLT	LEFT (RED)	PULSAR660EXP-L-24V
24 VOLT	RIGHT (GREEN)	PULSAR660EXP-R-24V
<u>CERTIFIED</u>		
12 VOLT	LEFT (RED)	PULSAR660TSO-L-12V
12 VOLT	RIGHT (GREEN)	PULSAR660TSO-R-12V
24 VOLT	LEFT (RED)	PULSAR660TSO-L-24V
24 VOLT	RIGHT (GREEN)	PULSAR660TSO-R-24V

STARLIGHT WING ICE INSPECTION LIGHT

Low-lying clouds and sub-zero temperatures can create hazardous ice formations on the wings of your aircraft. The StarLight™ wing inspection light was engineered with your safety in mind. This LED ice detection Lighting system (or wing inspection/wing scan light) provides optimum illumination of your wing to check for the formation of ice. Our wing inspection lights offer more total light output (Lumens) and a wider beam spread to give you the optimum amount of light needed. It also provides added visibility to your aircraft for collision avoidance and recognition. The StarLight Ice wing inspection light serves as an easy LED replacement for incandescent 7079 light bulbs.



- 24V
- Power consumption: 5 watts max
- Simple drop-in replacement. (Bay 15s)
- Approvals: FAA-PMA

VOLTAGE	PART #
24 VOLT	STARLIGHT

SUNBEACON II

SunBeacon II™ is a high performance aircraft beacon light that provides a 360-degree flash pattern around its vertical axis. This compact aircraft beacon light comes standard with a clear lens—available with either white or red LEDs. The SunBeacon II™ is a direct replacement for standard rotating aircraft beacons and flashing beacons. This aircraft strobe light offers superior anti-collision benefits with more light output for less power. The SunBeacon II™ requires zero maintenance and has an extremely low profile for reduced drag compared to other aircraft beacon lights. Red TSO C96a Class I & III, White TSO C96a Class II.



- 12V and 24V
- No external power supply needed
- Low power consumption
- Strobe synchronization available
- Easy installation
- Optional twist mount or 3.75" cup mount (diagrams on page 7 and 8 of installation manual)
- Approvals: FAA-TSO

VOLTAGE	COLOR	PART #
<u>CERTIFIED</u>		
12 VOLT	WHITE	SUNBEACON II-W-12
12 VOLT	RED	SUNBEACON II-R-12
24 VOLT	WHITE	SUNBEACON-II-W-24
24 VOLT	RED	SUNBEACON-II-R-24

SUNBEACON II (MOUNT KIT)

SunBeacon II mount kit which includes a mount bracket and a set screw.



DESCRIPTION	PART #
MOUNT KIT	01-1096

SUNBEACON II 3.75" ADAPTER MOUNT CUP

The SunBeacon II 3.75" Mount Kit is designed for various Cessna and Piper vertical stabilizer fairings. 3.75" OD X 1.0" ID. QTY:2 SCREW,RHPMS 6-32 x 1/4,Patch



VOLTAGE	PART #
24 VOLT	KIT-0049

SUNBEAM

SunBeam LED landing light with recognition is manufactured under FAA-PMA standards in a rectangular format for a completely versatile installation. It is also compatible as a drop-in replacement for the 70346 series lamp. Common installations include: Diamond DA-20/DA-40, Cessna Columbia, Liberty XL, some Cirrus models and some Grumman models. SunBeam comes standard with AeroLEDs signature integrated Pulse (WigWag), significantly increasing recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while drawing half the current.



- Over 65% more light output than the competition
- Power consumption: 38 watts max
- Color temperature – cool white
- Built-in pulse mode (standard)
- Synchronization
- Easy installation
- 30k hr MTBF
- Built-in thermal protection
- Aluminum/black powder coated heat sink
- UV hardcoated polycarbonate
- Approvals: FAA-PMA/STC

VOLTAGE	PART #
12 VOLT	SUNBEAM-12
24 VOLT	SUNBEAM-24

AIRCRAFT LIGHTING

SUNBEAM EQUINOX

The SunBeam EQUINOX is the latest advancement in the SunBeam series, offering dual-functionality for both landing and taxi operations in a single, high-performance unit. Engineered for superior illumination and FAA-PMA/STC-certified for Part 23 aircraft, the EQUINOX is a upgrade for pilots seeking enhanced visibility, efficiency, and reliability.



VOLTAGE DC	PART #
14	90-1000-LT-12-14V
28	90-1000-LT-24-28V

SUNRAY

The SunRay™ LED is a high-powered, compact experimental landing light. This wing-mounted LED features integrated Pulse or "WigWag" significantly increasing recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while drawing half the current. The versatility in placement of the SunRay™ makes it perfect for most airplane types. This light is small enough to fit in the wingtip cutout found in Van's RV kits.



- Power consumption: 10 watts max
- Higher color temperature – White
- Built-in pulse mode

VOLTAGE	PART #
9-40	SUNRAY

SUNSPOT 36-4000 (100W) LANDING LIGHT

Highest performance in the industry. SunSpot™ 36-4000 Series Landing Lights are designed as an LED drop-in replacement for existing legacy lights. -H version includes an integrated Pulse or "WigWag" feature that helps significantly increase recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while reducing the load on the electrical system by 50%. The SunSpot™ 36-4000 Series Landing Lights will fit all PAR36 configurations.



- Over 75% more light output than the competition
- Power consumption: 100W
- Higher color temperature – White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
12 VOLT	NO	SUNSPOT-36 4313
12 VOLT	NO	SUNSPOT-36 4313H
24 VOLT	YES	SUNSPOT-36 4596
24 VOLT	YES	SUNSPOT-36 4596H

SUNSPOT 36-4000 (100W) TAXI LIGHT

Highest performance in the industry. SunSpot™ 36-4000 Series Taxi Lights are designed as an LED drop-in replacement for existing legacy lights. -H version includes an integrated Pulse or "WigWag" feature that helps significantly increase recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while reducing the load on the electrical system by 50%. The SunSpot 36-4000 Series Taxi Lights will fit all PAR36 configurations.



- Over 75% more light output than the competition
- Power consumption: 100 watts max
- Higher color temperature – White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
12 VOLT	NO	SUNSPOT-36 4314
12 VOLT	YES	SUNSPOT-36 4314H
24 VOLT	NO	SUNSPOT-36 4587
24 VOLT	YES	SUNSPOT-36 4587H

SUNSPOT 36-4000 (75W) LANDING LIGHT

The SunSpot 36-4000 Series 75W tops the charts with the HIGHEST CANDELA IN THE INDUSTRY for a PAR 36 LED landing light. At just 75 watts, this line boasts an outstanding 200,000+ candela with a 15°x15° bright white beam angle that greatly improves visibility both on the ground and in the air from up to 30 miles away. The SunSpot 36 replacement LED's utilize the existing PAR36 mount and electrical connections for ease of installation. (-H versions require an additional wire). -H MODEL includes AeroLEDs signature integrated Pulse (WigWag) functionality. This feature helps to significantly increase recognition in both broad daylight as well as night operations, aiding in the avoidance of midair collisions and bird strikes. While in operation, this self contained pulse function reduces load on the electrical system by 50% as compared to incandescent bulbs.



- Highest candela in the industry for a PAR36 landing light
- Power consumption: 75 watts
- Higher color temperature – Aviation White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
12 VOLT	NO	SUNSPOT-36 4509
12 VOLT	YES	SUNSPOT-36 4509H
24 VOLT	NO	SUNSPOT-36 4591
24 VOLT	YES	SUNSPOT-36 4591H

SUNSPOT 36-4000 (75W) TAXI LIGHT

Highest performance in the industry. SunSpot™ 36-4000 Series Taxi Lights are designed as an LED drop-in replacement for existing legacy lights. -H version includes an integrated Pulse or "WigWag" feature that helps significantly increase recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while reducing the load on the electrical system by 50%. The SunSpot 36-4000 Series Taxi Lights will fit all PAR36 configurations.



- Over 75% more light output than the competition
- Power consumption: 75 watts max
- Higher color temperature – White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
12 VOLT	NO	SUNSPOT-36 4519
12 VOLT	YES	SUNSPOT-36 4519H
24 VOLT	NO	SUNSPOT-36 4626
24 VOLT	YES	SUNSPOT-36 4626H

SUNSPOT 46-4000 LANDING LIGHT

Highest performance in the industry. SunSpot™ 46-4000 Series Landing Lights are designed as an LED drop-in replacement for existing legacy lights. -H version includes an integrated Pulse or "WigWag" feature that helps significantly increase recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while reducing the load on the electrical system by 50%. The SunSpot™ 46-4000 Series Landing Lights will fit all PAR46 configurations.



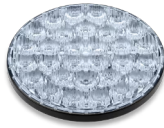
- Over 75% more light output than the competition
- Power consumption: 175 watts max
- Higher color temperature – White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
12 VOLT	NO	SUNSPOT-46 4522
12 VOLT	YES	SUNSPOT-46 4522H
24 VOLT	NO	SUNSPOT-46 4580
24 VOLT	YES	SUNSPOT-46 4580H

AIRCRAFT LIGHTING

SUNSPOT 46-4000 TAXI LIGHT

Highest performance in the industry. SunSpot™ 46-4000 Series Taxi Lights are designed as an LED drop-in replacement for existing legacy lights. -H version includes an integrated Pulse or "WigWag" feature that helps significantly increase recognition in broad daylight as well as night operations to help avoid midair collisions and bird strikes while reducing the load on the electrical system by 50%. The SunSpot™ 46-4000 Series Taxi Lights will fit all PAR46 configurations.



- Over 75% more light output than the competition
- Power consumption: 175 watts max
- Higher color temperature – White
- Built-in pulse mode (-H models)
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

VOLTAGE	WIGWAG	PART #
24 VOLT	NO	SUNSPOT-46 4554-T
24 VOLT	YES	SUNSPOT-46 4554-H-T

SUNSPOT 64-4000 LANDING LIGHT

Highest performance in the industry. SunSpot™ 64-4000 Series Landing Lights are designed as an LED drop-in replacement for existing PAR64 lights. The SunSpot™ 64-4000 Series Landing Lights will fit all PAR64 configurations.



- Highest performing PAR64 LED on the market
- Power consumption: 200 watts max
- Higher color temperature – White
- Simple drop-in replacement
- Approvals: FAA-PMA

VOLTAGE	PART #
24 VOLT	SUNSPOT-64

SUNSPOT PCX PILATUS LANDING LIGHT

The SunSpot™ 36 PCX series replacement LED's utilize existing Pilatus mounting configurations and electrical connections, making installation a true drop-in replacement. This PAR36 light is compatible with models: PC-7, PC-7 MKII, PC-9, PC-12 and PC-21.



- Over 75% more light output than the competition
- Power consumption: 100 watts max
- Higher color temperature – White
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

Aircraft this can be installed on are PC-7, PC-7 MKII, PC-9, PC-12 and PC-21.

VOLTAGE	PART #
24 VOLT	SUNSPOT-PCX

SUNSPOT PCX PILATUS TAXI LIGHT

The SunSpot™ 36 PCX series is a PAR36 replacement LED utilizing the existing Pilatus mounting configurations and electrical connections, making installation a true drop-in replacement.



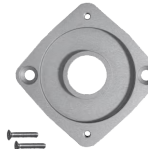
- Over 75% more light output than the competition
- Power consumption: 100 watts max
- Higher color temperature – White
- Simple drop-in replacement
- Approvals: FAA-PMA/STC

Aircraft these lights can be installed on are: PC-7, PC-7 MKII, PC-9, PC-12 and PC-21.

VOLTAGE	PART #
24 VOLT	SUNSPOT-PCX-T

SUNTAIL 90° ADAPTER MOUNT KIT

The SunTail 90° Adapter can be used to mount the vertical SunTail LED (PN: 01-1260-12, 01-1260-24, 11-1260-12, 11-1260-24) in applications where the taillight is mounted horizontally. It is FAA-PMA/STC approved and can be installed with certified PN's 11-1260-12 & 11-1260-24 on STC SA04837NY.



DESCRIPTION	PART #
MOUNT KIT	KIT-0064

SUNTAIL EXP

SUNTAIL LED STROBE/POSITION LIGHT. SunTail serves as an LED Anti-Collision Strobe and Position Light designed for the tail of the aircraft. SunTail can synchronize its strobe with any of AeroLEDs LED lighting products. SunTail does not require an external power supply and will retrofit the mounting footprint of legacy lighting. It meets and exceeds TSO-C30c Type III and TSO-C96a Class II.



- 12V and 24V
- No external power supply needed
- Low power consumption
- Strobe synchronization available
- Simple drop-in replacement (Horizontal mount)
- Experimental

VOLTAGE	STYLE	PART #
12 VOLT	EXPERIMENTAL	SUNTAIL-EXP-12
24 VOLT	EXPERIMENTAL	SUNTAIL-EXP-24

SUNTAIL-TSO

SunTail serves as an LED Anti-Collision Strobe and Position Light designed for the tail of the aircraft. SunTail can synchronize its strobe with any of AeroLEDs LED lighting products. SunTail does not require an external power supply and will retrofit the mounting footprint of legacy lighting. It is TSO-C30c Type III and TSO-C96a Class II approved.



- No external power supply needed
- Low power consumption
- Strobe synchronization available
- Simple drop-in replacement (Horizontal mount)
- Approvals: FAA-TSO

VOLTAGE	STYLE	PART #
12 VOLT	CERTIFIED	SUNTAIL-TSO-12V
24 VOLT	CERTIFIED	SUNTAIL-TSO-24V

AIRCRAFT PLACARDS

3M LETTER APPLICATOR SQUEEGE

Used to squeegee substrates or premask tape to film. Recommended for applications to FRP or other textured substrates.



DESCRIPTION	PART #
APPLICATOR	PA-1

AIRCRAFT LABELS

Specially designed label sheet for homebuilt aircraft. Easy to read placards and labels for marking controls, switches, circuit breakers etc. Black on heavy duty white vinyl. Resists scratching, fading and peeling. Just trim out, peel and stick. Makes your panel look like a factory job.



DESCRIPTION	PART #
VINYL LABELS	PLSVD

DANGER PROPELLER ARC PAIR

For use on many ultralights and rotorcraft. Warns bystanders of propeller or rotor proximity. Bi-directional arrows, trim off proper arrow head for your application. Black lettering on bright yellow. Vinyl overlaminated for long life. Two decals per package.



SIZE	PART #
1-1/2" X 4"	PWDVD

EXPERIMENTAL DECAL

New style single-piece decal with adhesive back. No need to line up 12 individual letters. One-step operation. Just remove the protective backing and apply to any clean surface. 2" black letters on clear Mylar base. Decal size: 2-1/2" x 19".



DESCRIPTION	PART #
MYLAR BASE	PC100-020

LEVEL POINT

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P- 15024-B. Adhesive meets MIL-P-6906-A.



DESCRIPTION	PART #
ALUMINUM 3.25" X 1"	54-1

LIGHT SPORT AIRCRAFT DECAL

Meets the requirements of FAR Part 45.23 (b) for a placard to be mounted near the cockpit entrance of a Light-Sport category aircraft. Black on clear vinyl lettering.



DESCRIPTION	PART #
PLACARD	PC100-035

BALLISTIC CHUTE DANGER

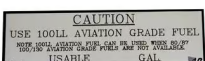
Choice of rectangular (1-1/4"x 4") or triangular (5-1/8" sides). Black and red on white vinyl. Used to warn EMS and maintenance personnel of potential danger.



DESCRIPTION	PART #
RECTANGULAR	BRSW2VD
TRIANGULAR	BRWVD

CAUTION USE LOW LEAD

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MILP- 6906-A.



SIZE	PART #
3.25" X 1"	101-1

DANGER PROP PLACARD

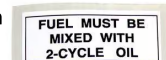
Black lettering on yellow vinyl. Designed for powered parachute prop cages, can be used on many other applications as well.



SIZE	PART #
1-5/8" X 6"	DPVDL

FUEL OIL MIX

Black on white vinyl. Used on aircraft and ultralights with two-stroke engines. FUEL MUST BE MIXED WITH 2 CYCLE OIL.



SIZE	PART #
3/4" X 1-1/2"	FOMVD

IDENTIFICATION PLATE

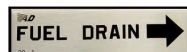
Made of aluminum foil with a pressure sensitive backing which adheres to most any surface that is clean and dry. The facing is made with a special anodize process which will resist sun fade-out and surface abrasion. Meets new FAA regulation requiring an identification plate to be placed on the exterior of the fuselage and military specifications. Customer engraves necessary information.



SIZE	PART #
3/4" X 4-1/2"	PC184-1

KFUEL DRAIN

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MILP- 6906-A.



SIZE	PART #
3/4" X 4-1/2"	29-1

N LETTERS - SPRAY MASK

Removable spray mask can be used only once. Please designate letters, straight or slanted, height or any special length desired. Priced per each letter/number. Special Order Item.



SIZE	PART #
3 INCH	LTR-SM3
12 INCH	LTR-SM12

N LETTERS - VINYL

Easy to install vinyl lettering is state of the art in the sign graphics industry. Computer generated, precision cut letters come with easy instructions. Letters can be ordered straight, forward slant, or back slant. Specify letter height and total length desired. Any color available. Priced per each letter/number. Special Order Item.



SIZE	PART #
2 INCH	LTR-2
3 INCH	LTR-3
12 INCH	LTR-12

NO LIFT, NO STEP ALUMINUM PEEL OFF

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P- 6906-A. Size: 1"x 3.25"



DESCRIPTION	PART #
NO STEP	24-1
NO LIFT	26-1

AIRCRAFT PLACARDS

NO LIFT; PUSH; STEP SOFT ALUMINUM PEEL OFF

Soft aluminum peel off stickers. 1-1/8" high by 3-1/2" length. Black lettering.



DESCRIPTION	PART #
NO STEP	PC100-024
NO PUSH	PC100-025
NO LIFT	PC100-026

NO STEP PLACARD

Soft aluminum sticker – 1-1/4" x 3-3/4"



SIZE	PART #
1-1/4" X 3-3/4"	JM-005

OCTANE BLUE, RED, OR GREEN

Gasoline and acid resistant fuel placards help reduce the possibility of being misfueled. Large (6" diameter) and easy to read. With punch out centers for special uses.



COLOR	OCTANE	PART #
BLUE	LOW LEAD 100	FC-100B
GREEN	100	FC-100G
RED	80	FC-80R
RED	92 UNLEAD AUTO GAS	FP-025

WHITE ON RED COOLANT PLACARD

Rotax engine specifications. White lettering on red background. COOLANT 60/40 SILICATE/PHOSPHATE FREE



SIZE	PART #
1/2" X 3-1/2"	CPRVD

AIRCRAFT ARROW

Custom computer cut decals to indicate operation of door handles in clockwise or counterclock positions. Arrow and "open" can be separated for individual placement. Color – red. Size: 2"x 3-1/2"



PART #	DESCRIPTION
OACW	CLOCKWISE
OACCW	COUNTER-CLOCKWISE

AIRCRAFT SOLO

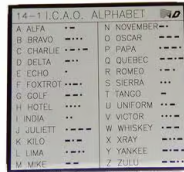
Solo from front or rear seat only. Silkscreened in red ink on white all weather vinyl. Size: 1"x 3"



DESCRIPTION	PART #
FRONT SEAT ONLY	SFSVD
REAR SEAT ONLY	SRSVD

ALPHABET PLACARD ALUMINUM

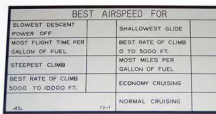
Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.



SIZE	PART #
2" X 2"	14-1

BEST AIRSPEED FLYLESS FUEL

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.



SIZE	PART #
4.2" X 1.25"	12-1

CANOPY RELEASE PLACARD

Black on white vinyl. Marks location of emergency release mechanisms for Canopy.

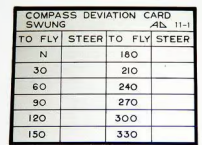


CANOPY RELEASE DO NOT OPEN IN FLIGHT UNLESS YOU ARE LEAVING!

SIZE	PART #
7/8" X 2"	CARVD

COMPASS DEVIATION PLACARD

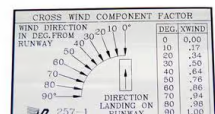
Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.



SIZE	PART #
2" X 2"	11-1

CROSS WIND COMPONENT

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.



SIZE	PART #
3.15" X 1.9"	257-1

DOOR RELEASE PLACARD

Black on white vinyl. Marks location of emergency release mechanisms for Door. Door Release Do Not Open In Flight Unless You Are Leaving!



DOOR RELEASE DO NOT OPEN IN FLIGHT UNLESS YOU ARE LEAVING!

SIZE	PART #
7/8" X 3-1/8"	DORVD

EMERGENCY EXIT PLACARD

Emergency exit placard – aluminum.



SIZE	PART #
3.25" X 1"	47-1

FASTEN SEAT BELT PLACARD

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.



SIZE	PART #
3.25" X 1"	247-1

AIRCRAFT PLACARDS

FUEL PLACARDS

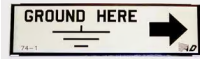
Custom made: special capacity, octane, left/right fuel, specify labeling requirements. Available: black on white or black on clear.



COLOR	PART #
BLACK ON CLEAR	FP-BC
BLACK ON WHITE	FP-BW

GROUND HERE PLACARD

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P- 6906-A.



SIZE	PART #
3.25" X 1"	74-1

NO SMOKING ALUMINUM

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P- 6906-A.



SIZE	PART #
3.25" X 1"	41-1

NO SMOKING DECAL RED & WHITE

Vinyl decal white lettering on red background. Designed for panel mounting in tandem seat aircraft.



SIZE	PART #
5/8" X 3-1/4"	NSDSM

PASSENGER WARNING - SLSA

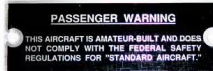
Red Lettering on White Vinyl. 3-7/8" x 1-1/4". Passenger Warning. This Aircraft Does Not Comply With The Federal Safety Regulations For Standard Aircraft.



SIZE	PART #
3-7/8" X 1-1/4"	PC100-045

PASSENGER WARNING PLACARD

This placard must be displayed in the cockpit of all amateur-built aircraft. Black on silver. Size: 1-1/4" x 3-3/4". STAINLESS STEEL



SIZE	PART #
1-1/4" X 3-3/4"	PC100-015S

RECOMMENDED AIRSPEED DECAL

Black on white vinyl. May be written on with a fine point indelible marker. Provides space for all your most important airspeeds.



SIZE	PART #
3-1/2" X 4-1/2"	RASVD

STAINLESS NAMEPLATE

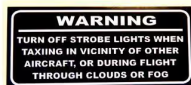
All amateur-built aircraft must have a nameplate. Size: 3" x 4-1/4". (Requires data to be etched or stamped.) Mounting hole diameter 5/32".



DESCRIPTION	PART #
STAINLESS NAMEPLATE	PC100-005

STROBE WARNING DECAL VINYL

Strobe Warning – Vinyl. Size: 1"x 2-1/4" White on Black. WARNING Turn Off Strobe Lights When Taxiing In Vicinity Of Other Aircraft, Or During Flight Through Clouds Or Fog.



SIZE	PART #
1" X 2-1/4"	SPVDL

TRANSMIT-VHF-RECEIVE PLACARD

This placard is great for using in the cockpit. It lists Transmit, VHF, and Receive information. Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion.

N NUMBER HERE		
TRANSMIT	VHF	RECEIVE
121.5	EMERGENCY	121.5
121.6 TO 121.9	GROUND CONTROL	121.9
122.0	FLIGHT WATCH	122.0
122.2	FSS (RADIO)	122.2
122.75 OR 122.85	AIR TO AIR	122.75 OR 122.85

DESCRIPTION	PART #
TRANSMIT/VHF/RECEIVE	252-1

VFR TRANSPONDER CODE PLACARD

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG-455B and MIL-P-15024-B. Adhesive meets MIL-P-6906-A.

VFR TRANSPONDER CODES	
CODE	FUNCTION
0000	NEVER USE
1200	VFR
7500	HIJACK
7600	LOST COMM.
7700	EMERGENCY

DESCRIPTION	PART #
VFR TRANSPONDER CODE	52-1

PASSENGER WARNING - ELSA

Made of high quality aluminum placard with a pressure sensitive backing will adhere to most any surface that is clean and dry. Facing is made with special anodize process which will resist sun fade-out and surface abrasion. Meets Federal Specs GG- 455B and MIL-P-15024-B. Adhesive meets MILP- 6906-A.



SIZE	PART #
3-7/8" X 1-1/2"	PC100-040

AIRCRAFT PLYWOOD

BASSWOOD AND BASSWOOD PLYWOOD AIRCRAFT GRADE MIL-P-6070

Plywood for aircraft is produced by using glues of the thermosetting, synthetic resin type. The quality requirements for plywood to be used in aircraft are much more exacting than for industrial plywood in general. Aircraft plywood meets MIL-P-6070B. The mill specification requires that the plywood be tested for general condition of boards, deviations of thickness, moisture content, tensile strength of wood, gluing strength, bending test, torsion test, immersion test and boiling test. Plywood is factory certified. MIL-P-6070B is laminated in hot press with waterproof glue. 90° grain runs with 8' direction. 45° grain runs diagonal (use for spar facing). Approximate weight is based on 4' X 8' sheets.



ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 8	1/16"	1/16X4X8BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 4	1/16"	1/16X4X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 4	1/16"	1/16X2X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 2	1/16"	1/16X2X2BS90
90°	BASSWOOD/BASSWOOD	3 PLY	1 X 4	1/16"	1/16X1X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 8	1/8"	1/8X4X8BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 4	1/8"	1/8X4X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 4	1/8"	1/8X2X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 2	1/8"	1/8X2X2BS90
90°	BASSWOOD/BASSWOOD	3 PLY	1 X 4	1/8"	1/8X1X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 8	3/32"	3/32X4X8BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 4	3/32"	3/32X4X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 4	3/32"	3/32X2X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 2	3/32"	3/32X2X2BS90
90°	BASSWOOD/BASSWOOD	3 PLY	1 X 4	3/32"	3/32X1X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 8	3/16"	3/16X4X8BS90
90°	BASSWOOD/BASSWOOD	3 PLY	4 X 4	3/16"	3/16X4X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 4	3/16"	3/16X2X4BS90
90°	BASSWOOD/BASSWOOD	3 PLY	2 X 2	3/16"	3/16X2X2BS90
90°	BASSWOOD/BASSWOOD	3 PLY	1 X 4	3/16"	3/16X1X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 8	3/16"	3/16X4X8BS90-5
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 4	3/16"	3/16X4X4BS90-5
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 4	3/16"	3/16X2X4BS90-5
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 2	3/16"	3/16X2X2BS90-5
90°	BASSWOOD/BASSWOOD	5 PLY	1 X 4	3/16"	3/16X1X4BS90-5
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 8	1/4"	1/4X4X8BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 4	1/4"	1/4X4X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 4	1/4"	1/4X2X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 2	1/4"	1/4X2X2BS90
90°	BASSWOOD/BASSWOOD	5 PLY	1 X 4	1/4"	1/4X1X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 8	5/16"	5/16X4X8BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 4	5/16"	5/16X4X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 4	5/16"	5/16X2X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 2	5/16"	5/16X2X2BS90
90°	BASSWOOD/BASSWOOD	5 PLY	1 X 4	5/16"	5/16X1X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 8	3/8"	3/8X4X8BS90
90°	BASSWOOD/BASSWOOD	5 PLY	4 X 4	3/8"	3/8X4X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 4	3/8"	3/8X2X4BS90
90°	BASSWOOD/BASSWOOD	5 PLY	2 X 2	3/8"	3/8X2X2BS90
90°	BASSWOOD/BASSWOOD	5 PLY	1 X 4	3/8"	3/8X1X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	4 X 8	7/16"	7/16X4X8BS90
90°	BASSWOOD/BASSWOOD	7 PLY	4 X 4	7/16"	7/16X4X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	2 X 4	7/16"	7/16X2X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	2 X 2	7/16"	7/16X2X2BS90
90°	BASSWOOD/BASSWOOD	7 PLY	1 X 4	7/16"	7/16X1X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	4 X 8	1/2"	1/2X4X8BS90
90°	BASSWOOD/BASSWOOD	7 PLY	4 X 4	1/2"	1/2X4X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	2 X 4	1/2"	1/2X2X4BS90
90°	BASSWOOD/BASSWOOD	7 PLY	2 X 2	1/2"	1/2X2X2BS90
90°	BASSWOOD/BASSWOOD	7 PLY	1 X 4	1/2"	1/2X1X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	4 X 8	5/8"	5/8X4X8BS90
90°	BASSWOOD/BASSWOOD	9 PLY	4 X 4	5/8"	5/8X4X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	2 X 4	5/8"	5/8X2X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	2 X 2	5/8"	5/8X2X2BS90
90°	BASSWOOD/BASSWOOD	9 PLY	1 X 4	5/8"	5/8X1X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	4 X 8	3/4"	3/4X4X8BS90
90°	BASSWOOD/BASSWOOD	9 PLY	4 X 4	3/4"	3/4X4X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	2 X 4	3/4"	3/4X2X4BS90
90°	BASSWOOD/BASSWOOD	9 PLY	2 X 2	3/4"	3/4X2X2BS90
90°	BASSWOOD/BASSWOOD	9 PLY	1 X 4	3/4"	3/4X1X4BS90

BIRCH AND BASSWOOD PLYWOOD AIRCRAFT GRADE MIL-P-6070

Plywood for aircraft is produced by using glues of the thermosetting, synthetic resin type. The quality requirements for plywood to be used in aircraft are much more exacting than for industrial plywood in general. Aircraft plywood meets MIL-P-6070B. The mill specification requires that the plywood be tested for general condition of boards, deviations of thickness, moisture content, tensile strength of wood, gluing strength, bending test, torsion test, immersion test and boiling test. Plywood is factory certified. MIL-P-6070B is laminated in hot press with waterproof glue. 90° grain runs with 8' direction. 45° grain runs diagonal (use for spar facing). Approximate weight is based on 4' X 8' sheets.



ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	BIRCH/BASSWOOD	3 PLY	4 X 8	1/16"	1/16X4X8BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 4	1/16"	1/16X4X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 4	1/16"	1/16X2X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 2	1/16"	1/16X2X2BB90
90°	BIRCH/BASSWOOD	3 PLY	1 X 4	1/16"	1/16X1X4BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 8	3/32"	3/32X4X8BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 4	3/32"	3/32X4X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 4	3/32"	3/32X2X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 2	3/32"	3/32X2X2BB90
90°	BIRCH/BASSWOOD	3 PLY	1 X 4	3/32"	3/32X1X4BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 8	1/8"	1/8X4X8BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 4	1/8"	1/8X4X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 4	1/8"	1/8X2X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 2	1/8"	1/8X2X2BB90
90°	BIRCH/BASSWOOD	3 PLY	1 X 4	1/8"	1/8X1X4BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 8	3/16"	3/16X4X8BB90
90°	BIRCH/BASSWOOD	3 PLY	4 X 4	3/16"	3/16X4X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 4	3/16"	3/16X2X4BB90
90°	BIRCH/BASSWOOD	3 PLY	2 X 2	3/16"	3/16X2X2BB90
90°	BIRCH/BASSWOOD	3 PLY	1 X 4	3/16"	3/16X1X4BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 8	1/4"	1/4X4X8BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 4	1/4"	1/4X4X4BB90
90°	BIRCH/BASSWOOD	5 PLY	2 X 4	1/4"	1/4X2X4BB90
90°	BIRCH/BASSWOOD	5 PLY	2 X 2	1/4"	1/4X2X2BB90
90°	BIRCH/BASSWOOD	5 PLY	1 X 4	1/4"	1/4X1X4BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 8	5/16"	5/16X4X8BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 4	5/16"	5/16X4X4BB90
90°	BIRCH/BASSWOOD	5 PLY	2 X 4	5/16"	5/16X2X4BB90
90°	BIRCH/BASSWOOD	5 PLY	2 X 2	5/16"	5/16X2X2BB90
90°	BIRCH/BASSWOOD	5 PLY	1 X 4	5/16"	5/16X1X4BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 8	3/8"	3/8X4X8BB90
90°	BIRCH/BASSWOOD	5 PLY	4 X 4	3/8"	3/8X4X4BB90
90°	BIRCH/BASSWOOD	5 PLY	2 X 4	3/8"	3/8X2X4BB90
90°	BIRCH/BASSWOOD	5 PLY	1 X 4	3/8"	3/8X1X4BB90

AIRCRAFT PLYWOOD

BIRCH AND POPLAR PLYWOOD AIRCRAFT GRADE MIL-P-6070

Plywood for aircraft is produced by using glues of the thermosetting, synthetic resin type. The quality requirements for plywood to be used in aircraft are much more exacting than for industrial plywood in general. Aircraft plywood meets MIL-P-6070B. The mill specification requires that the plywood be tested for general condition of boards, deviations of thickness, moisture content, tensile strength of wood, gluing strength, bending test, torsion test, immersion test and boiling test. Plywood is factory certified. MIL-P-6070B is laminated in hot press with waterproof glue. 90° grain runs with 8' direction. 45° grain runs diagonal (use for spar facing). Approximate weight is based on 4' X 8' sheets.



Plywood for aircraft is produced by using glues of the thermosetting, synthetic resin type. The quality requirements for plywood to be used in aircraft are much more exacting than for industrial plywood in general. Aircraft plywood meets MIL-P-6070B. The mill specification requires that the plywood be tested for general condition of boards, deviations of thickness, moisture content, tensile strength of wood, gluing strength, bending test, torsion test, immersion test and boiling test. Plywood is factory certified. MIL-P-6070B is laminated in hot press with waterproof glue. 90° grain runs with 8' direction. 45° grain runs diagonal (use for spar facing). Approximate weight is based on 4' X 8' sheets.



ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	BIRCH/POPLAR	3 PLY	4 X 8	1/16"	1/16X4X8B90
90°	BIRCH/POPLAR	3 PLY	4 X 4	1/16"	1/16X4X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 4	1/16"	1/16X2X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 2	1/16"	1/16X2X2B90
90°	BIRCH/POPLAR	3 PLY	1 X 4	1/16"	1/16X1X4B90
45°	BIRCH/POPLAR	3 PLY	4 X 8	1/16"	1/16X4X8B45
45°	BIRCH/POPLAR	3 PLY	4 X 4	1/16"	1/16X4X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 4	1/16"	1/16X2X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 2	1/16"	1/16X2X2B45
45°	BIRCH/POPLAR	3 PLY	1 X 4	1/16"	1/16X1X4B45
90°	BIRCH/POPLAR	3 PLY	4 X 8	3/32"	3/32X4X8B90
90°	BIRCH/POPLAR	3 PLY	4 X 4	3/32"	3/32X4X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 4	3/32"	3/32X2X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 2	3/32"	3/32X2X2B90
90°	BIRCH/POPLAR	3 PLY	1 X 4	3/32"	3/32X1X4B90
45°	BIRCH/POPLAR	3 PLY	4 X 8	3/32"	3/32X4X8B45
45°	BIRCH/POPLAR	3 PLY	4 X 4	3/32"	3/32X4X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 4	3/32"	3/32X2X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 2	3/32"	3/32X2X2B45
45°	BIRCH/POPLAR	3 PLY	1 X 4	3/32"	3/32X1X4B45
90°	BIRCH/POPLAR	3 PLY	4 X 8	1/8"	1/8X4X8B90
90°	BIRCH/POPLAR	3 PLY	4 X 4	1/8"	1/8X4X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 4	1/8"	1/8X2X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 2	1/8"	1/8X2X2B90
90°	BIRCH/POPLAR	3 PLY	1 X 4	1/8"	1/8X1X4B90
45°	BIRCH/POPLAR	3 PLY	4 X 8	1/8"	1/8X4X8B45
45°	BIRCH/POPLAR	3 PLY	4 X 4	1/8"	1/8X4X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 4	1/8"	1/8X2X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 2	1/8"	1/8X2X2B45
45°	BIRCH/POPLAR	3 PLY	1 X 4	1/8"	1/8X1X4B45
90°	BIRCH/POPLAR	3 PLY	4 X 8	3/16"	3/16X4X8B90
90°	BIRCH/POPLAR	3 PLY	4 X 4	3/16"	3/16X4X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 2	3/16"	3/16X2X4B90
90°	BIRCH/POPLAR	3 PLY	2 X 2	3/16"	3/16X2X2B90
90°	BIRCH/POPLAR	3 PLY	1 X 4	3/16"	3/16X1X4B90
45°	BIRCH/POPLAR	3 PLY	4 X 8	3/16"	3/16X4X8B45
45°	BIRCH/POPLAR	3 PLY	4 X 4	3/16"	3/16X4X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 2	3/16"	3/16X2X4B45
45°	BIRCH/POPLAR	3 PLY	2 X 2	3/16"	3/16X2X2B45
45°	BIRCH/POPLAR	3 PLY	1 X 4	3/16"	3/16X1X4B45
90°	BIRCH/POPLAR	5 PLY	4 X 8	3/16"	3/16X4X8B90-5
90°	BIRCH/POPLAR	5 PLY	4 X 4	3/16"	3/16X4X4B90-5
90°	BIRCH/POPLAR	5 PLY	2 X 4	3/16"	3/16X2X4B90-5
90°	BIRCH/POPLAR	5 PLY	2 X 2	3/16"	3/16X2X2B90-5
90°	BIRCH/POPLAR	5 PLY	1 X 4	3/16"	3/16X1X4B90-5
45°	BIRCH/POPLAR	5 PLY	4 X 8	3/16"	3/16X4X8B90-5
45°	BIRCH/POPLAR	5 PLY	4 X 4	3/16"	3/16X4X4B90-5
45°	BIRCH/POPLAR	5 PLY	2 X 4	3/16"	3/16X2X4B90-5
45°	BIRCH/POPLAR	5 PLY	2 X 2	3/16"	3/16X2X2B90-5
45°	BIRCH/POPLAR	5 PLY	1 X 4	3/16"	3/16X1X4B90-5
90°	BIRCH/POPLAR	5 PLY	4 X 8	1/4"	1/4X4X8B90
90°	BIRCH/POPLAR	5 PLY	4 X 4	1/4"	1/4X4X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 4	1/4"	1/4X2X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 2	1/4"	1/4X2X2B90
90°	BIRCH/POPLAR	5 PLY	1 X 4	1/4"	1/4X1X4B90
45°	BIRCH/POPLAR	5 PLY	4 X 8	1/4"	1/4X4X8B45
45°	BIRCH/POPLAR	5 PLY	4 X 4	1/4"	1/4X4X4B45
45°	BIRCH/POPLAR	5 PLY	2 X 4	1/4"	1/4X2X4B45
45°	BIRCH/POPLAR	5 PLY	2 X 2	1/4"	1/4X2X2B45
45°	BIRCH/POPLAR	5 PLY	1 X 4	1/4"	1/4X1X4B45

ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	BIRCH/POPLAR	5 PLY	4 X 8	5/16"	5/16X4X8B90
90°	BIRCH/POPLAR	5 PLY	4 X 4	5/16"	5/16X4X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 4	5/16"	5/16X2X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 2	5/16"	5/16X2X2B90
90°	BIRCH/POPLAR	5 PLY	1 X 4	5/16"	5/16X1X4B90
90°	BIRCH/POPLAR	5 PLY	4 X 8	3/8"	3/8X4X8B90
90°	BIRCH/POPLAR	5 PLY	4 X 4	3/8"	3/8X4X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 4	3/8"	3/8X2X4B90
90°	BIRCH/POPLAR	5 PLY	2 X 2	3/8"	3/8X2X2B90
90°	BIRCH/POPLAR	5 PLY	1 X 4	3/8"	3/8X1X4B90
90°	BIRCH/POPLAR	7 PLY	4 X 8	7/16"	7/16X4X8B90
90°	BIRCH/POPLAR	7 PLY	4 X 4	7/16"	7/16X4X4B90
90°	BIRCH/POPLAR	7 PLY	2 X 4	7/16"	7/16X2X4B90
90°	BIRCH/POPLAR	7 PLY	2 X 2	7/16"	7/16X2X2B90
90°	BIRCH/POPLAR	7 PLY	1 X 4	7/16"	7/16X1X4B90
90°	BIRCH/POPLAR	7 PLY	4 X 8	1/2"	1/2X4X8B90
90°	BIRCH/POPLAR	7 PLY	4 X 4	1/2"	1/2X4X4B90
90°	BIRCH/POPLAR	7 PLY	2 X 4	1/2"	1/2X2X4B90
90°	BIRCH/POPLAR	7 PLY	2 X 2	1/2"	1/2X2X2B90
90°	BIRCH/POPLAR	7 PLY	1 X 4	1/2"	1/2X1X4B90

AIRCRAFT PLYWOOD

MAHOGANY AND POPLAR PLYWOOD AIRCRAFT GRADE MIL-P-6070

Plywood for aircraft is produced by using glues of the thermosetting, synthetic resin type. The quality requirements for plywood to be used in aircraft are much more exacting than for industrial plywood in general. Aircraft plywood meets MIL-P-6070B. The mill specification requires that the plywood be tested for general condition of boards, deviations of thickness, moisture content, tensile strength of wood, gluing strength, bending test, torsion test, immersion test and boiling test. Plywood is factory certified. MIL-P-6070B is laminated in hot press with waterproof glue. 90° grain runs with 8' direction. 45° grain runs diagonal (use for spar facing). Approximate weight is based on 4' X 8' sheets.



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ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	MAHOGANY/POPLAR	3 PLY	4 X 8	1/16"	1/16X4X8M90
90°	MAHOGANY/POPLAR	3 PLY	4 X 4	1/16"	1/16X4X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 4	1/16"	1/16X2X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 2	1/16"	1/16X2X2M90
90°	MAHOGANY/POPLAR	3 PLY	1 X 4	1/16"	1/16X1X4M90
45°	MAHOGANY/POPLAR	3 PLY	4 X 8	1/16"	1/16X4X8M45
45°	MAHOGANY/POPLAR	3 PLY	4 X 4	1/16"	1/16X4X4M45
45°	MAHOGANY/POPLAR	3 PLY	2 X 4	1/16"	1/16X2X4M45
45°	MAHOGANY/POPLAR	3 PLY	2 X 2	1/16"	1/16X2X2M45
45°	MAHOGANY/POPLAR	3 PLY	1 X 4	1/16"	1/16X1X4M45
90°	MAHOGANY/POPLAR	3 PLY	4 X 8	3/32"	3/32X4X8M90
90°	MAHOGANY/POPLAR	3 PLY	4 X 4	3/32"	3/32X4X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 4	3/32"	3/32X2X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 2	3/32"	3/32X2X2M90
90°	MAHOGANY/POPLAR	3 PLY	1 X 4	3/32"	3/32X1X4M90
90°	MAHOGANY/POPLAR	3 PLY	4 X 8	3/32"	3/32X4X8M45
90°	MAHOGANY/POPLAR	3 PLY	4 X 4	3/32"	3/32X4X4M45
90°	MAHOGANY/POPLAR	3 PLY	2 X 4	3/32"	3/32X2X4M45
90°	MAHOGANY/POPLAR	3 PLY	2 X 2	3/32"	3/32X2X2M45
90°	MAHOGANY/POPLAR	3 PLY	1 X 4	3/32"	3/32X1X4M45
90°	MAHOGANY/POPLAR	3 PLY	4 X 8	1/8"	1/8X4X8M90
90°	MAHOGANY/POPLAR	3 PLY	4 X 4	1/8"	1/8X4X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 4	1/8"	1/8X2X4M90
90°	MAHOGANY/POPLAR	3 PLY	2 X 2	1/8"	1/8X2X2M90
90°	MAHOGANY/POPLAR	3 PLY	1 X 4	1/8"	1/8X1X4M90
90°	MAHOGANY/POPLAR	3 PLY	4 X 8	1/8"	1/8X4X8M45
90°	MAHOGANY/POPLAR	3 PLY	4 X 4	1/8"	1/8X4X4M45
90°	MAHOGANY/POPLAR	3 PLY	2 X 4	1/8"	1/8X2X4M45
90°	MAHOGANY/POPLAR	3 PLY	2 X 2	1/8"	1/8X2X2M45
90°	MAHOGANY/POPLAR	3 PLY	1 X 4	1/8"	1/8X1X4M45
90°	MAHOGANY/POPLAR	5 PLY	4 X 8	3/16"	3/16X4X8M90-5
90°	MAHOGANY/POPLAR	5 PLY	4 X 4	3/16"	3/16X4X4M90-5
90°	MAHOGANY/POPLAR	5 PLY	2 X 4	3/16"	3/16X2X4M90-5
90°	MAHOGANY/POPLAR	5 PLY	2 X 2	3/16"	3/16X2X2M90-5
90°	MAHOGANY/POPLAR	5 PLY	1 X 4	3/16"	3/16X1X4M90-5
45°	MAHOGANY/POPLAR	5 PLY	4 X 8	3/16"	3/16X4X8M45-5
45°	MAHOGANY/POPLAR	5 PLY	4 X 4	3/16"	3/16X4X4M45-5
45°	MAHOGANY/POPLAR	5 PLY	2 X 4	3/16"	3/16X2X4M45-5
45°	MAHOGANY/POPLAR	5 PLY	2 X 2	3/16"	3/16X2X2M45-5
45°	MAHOGANY/POPLAR	5 PLY	1 X 4	3/16"	3/16X1X4M45-5
90°	MAHOGANY/POPLAR	5 PLY	4 X 8	1/4"	1/4X4X8M90
90°	MAHOGANY/POPLAR	5 PLY	4 X 4	1/4"	1/4X4X4M90
90°	MAHOGANY/POPLAR	5 PLY	2 X 4	1/4"	1/4X2X4M90
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90°	MAHOGANY/POPLAR	5 PLY	4 X 8	5/16"	5/16X4X8M90
90°	MAHOGANY/POPLAR	5 PLY	4 X 4	5/16"	5/16X4X4M90
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90°	MAHOGANY/POPLAR	5 PLY	2 X 2	5/16"	5/16X2X2M90
90°	MAHOGANY/POPLAR	5 PLY	1 X 4	5/16"	5/16X1X4M90
90°	MAHOGANY/POPLAR	5 PLY	4 X 8	3/8"	3/8X4X8M90
90°	MAHOGANY/POPLAR	5 PLY	4 X 4	3/8"	3/8X4X4M90
90°	MAHOGANY/POPLAR	5 PLY	2 X 4	3/8"	3/8X2X4M90
90°	MAHOGANY/POPLAR	5 PLY	2 X 2	3/8"	3/8X2X2M90
90°	MAHOGANY/POPLAR	5 PLY	1 X 4	3/8"	3/8X1X4M90

ANGLE	FACE/CORE	PLY	SIZE FEET	THICK NESS	PART #
90°	MAHOGANY/POPLAR	7 PLY	4 X 8	7/16"	7/16X4X8M90
90°	MAHOGANY/POPLAR	7 PLY	4 X 4	7/16"	7/16X4X4M90
90°	MAHOGANY/POPLAR	7 PLY	2 X 4	7/16"	7/16X2X4M90
90°	MAHOGANY/POPLAR	7 PLY	2 X 2	7/16"	7/16X2X2M90
90°	MAHOGANY/POPLAR	7 PLY	1 X 4	7/16"	7/16X1X4M90
90°	MAHOGANY/POPLAR	7 PLY	4 X 8	1/2"	1/2X4X8M90
90°	MAHOGANY/POPLAR	7 PLY	4 X 4	1/2"	1/2X4X4M90
90°	MAHOGANY/POPLAR	7 PLY	2 X 4	1/2"	1/2X2X4M90
90°	MAHOGANY/POPLAR	7 PLY	2 X 2	1/2"	1/2X2X2M90
90°	MAHOGANY/POPLAR	7 PLY	1 X 4	1/2"	1/2X1X4M90

AIRCRAFT PLYWOOD

METRIC BIRCH PLYWOOD

Imported Finnish grade AB/B meets the following mill specifications:
Under 2.0mm thickness – at least 3 ply
The 2.0mm thickness is available in 4 ply. From 2.5mm thickness up to and including 6.0mm at least 5-ply. 0.8MM through 1.5MM may be rolled for UPS shipment. All other sizes must be cut 2' x 4' to ship UPS.



SIZE FEET	THICK NESS	PLY	PART #
4X4	0.8MM	3	0.8MMX4X4B
2X4	0.8MM	3	0.8MMX2X4B
4X4	1.0MM	3	1.0MMX4X4B
2X4	1.0MM	3	1.0MMX2X4B
4X4	1.5MM	3	1.5MMX4X4B
2X4	1.5MM	3	1.5MMX2X4B
4X4	2.0MM	5	2.0MMX4X4B
2X4	2.0MM	5	2.0MMX2X4B
4X4	2.5MM	5	2.5MMX4X4B
2X4	2.5MM	5	2.5MMX2X4B
4X4	3.0MM	7	3.0MMX4X4B
2X4	3.0MM	7	3.0MMX2X4B
4X4	4.0MM	8	4.0MMX4X4B
2X4	4.0MM	8	4.0MMX2X4B
4X4	5.0MM	10	5.0MMX4X4B
2X4	5.0MM	10	5.0MMX2X4B
4X4	6.0MM	12	6.0MMX4X4B
2X4	6.0MM	12	6.0MMX2X4B

AVIATION BOOKS & TEXTBOOKS

THE STANDARD PILOT LOG

First choice of flight schools and instructors for use with student pilots. Hard bound cover. Shaded columns for separation clarity. 4" x 7-5/8". 68 pages.



PART#

SP-30

STANDARD PILOT LOG (DELUXE)

First choice of flight schools and instructors for use with student pilots. Hard bound cover. Shaded columns for separation clarity. 4" x 7-5/8". 144 pages.



PART#

SP-40

STANDARD AIRCRAFT LOG SOFTCOVER

New and up to date. Has all the necessary pages to comply with FAR 91.173. Plenty of writing space for the mechanic. Soft cover. 4" x 7-1/4" 62 pages.



PART#

SA-1

STANDARD AIRCRAFT LOG HARDCOVER

Designed to help keep records of entire aircraft in order: inspections, repairs, alterations, service bulletins, equipment changes. Hard cover. 5-5/8" x 7-3/4". 94 pages.



PART#

SA-2

STANDARD ENGINE LOG

The companion log to the SA-1. 5-5/8" x 7-3/4". 62 pages.

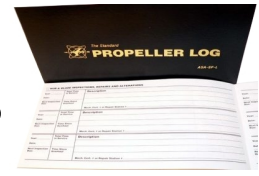


PART#

SE-1

STANDARD PROPELLER LOG

Space to record data for hub and blade inspections, repairs, and alterations. Soft cover. 4" x 7-1/2". 20 pages.



PART#

P-1

FIREWALL FORWARD

Provides information about engine installation practices that are proven effective and practical for piston engines. Includes photos and detailed illustrations. 302 pages.



PART#

FF-1

SPORTPLANE CONSTRUCTION

Contains valuable information on multiple construction techniques. Illustrated with photos and detailed drawings. 350 pages.



PART#

SC-1

THE SPORTPLANE BUILDER

Contains information about construction methods and techniques that only the old pros know. 312 pages.

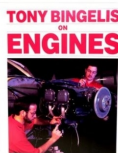


PART#

SP-1

AIRCRAFT ENGINES

240 pages covering engine selection, installation, firewall preparation, engine baffles, cooling, engine compartment, ignition, electrical, fuel system, exhaust, props, and spinners.

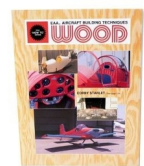


PART#

AE-1

AIRCRAFT BUILDING TECHNIQUES (WOOD)

Excellent resource book on how to build or repair wood aircraft. 136 pages.



PART#

TR100-125

CONSTRUCTION OF STEEL FUSELAGES

A thorough manual providing step by step instructions on how to construct a strong, symmetrical, and accurate steel fuselage.

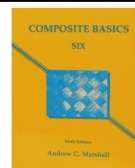


PART#

TSF1

COMPOSITE BASICS

Explains how to work with a wide range of composites and covers their properties, stress limits, strengths and weaknesses. 203 pages.



PART#

CB2

AIRFOIL SELECTION

This book will aid you in understanding and choosing airfoils for light aircraft. 57 pages, illustrated.



PART#

AS-1

MOLDLESS COMPOSITE CONSTRUCTION

26 11" x 17" pages describing materials, methods, and tools used for moldless composite sandwich homebuilt aircraft construction.



PART#

CB

CLEANERS & POLISH

BELLY WASH SURFACE DEGREASER

This popular aircraft cleaning product is now available for general vehicle application in a ready to use concentrate. This product gently yet thoroughly degreases and cleans all surfaces, leaving no streaks or water spots.



PART#

08-020

CRUD REMOVER

Without question, the strongest, most powerful cleaner you've ever experienced! Works where all others fail. PPC's best seller for over 25 years. Multi-surface usability and dilution versatility, water-based and biodegradable.



PART#

CR

EASY ALUMINUM POLISH

A unique liquid formula that produces a "mirror like" shine in seconds on smooth aluminum, magnesium, stainless, brass, and nickel.



PART#

EAP

PERFECT DETAIL

Multi-surface versatility enables this product to work on everything – glass, paint, plastic, chrome, wood finishes, etc. A favorite of automotive, motorcycle, and aircraft enthusiasts.



PART#

PD

BUG MELT

Even the worst baked-on bug splatters are easily removed by using this surface-safe product. The neutral pH solution gently turns hardened bug residue into soft mush for effective, safe removal from any surface.



PART#

PPP

REAL WHEEL CLEANER

Melts brake dust, dissolves corrosion from all metals, cannot damage clear coats, plastics, anodizing paint or any metal. Can be used on showers & tubs, lime deposits, boat scum, water spots, brass, copper, zinc and bugs.



PART#

RWC

ALL KLEER PLASTIC POLISH

All Kleer is different than most windshield products as it not only cleans dirt, bugs, water spots, and grease but leaves a very fine, slick finish.



PART#

ALL-KLEER

CLEARVIEW CLEANER & POLISH

Clean, protect, and polish all types of clear and colored plastics. Works great on clear soft vinyl windows and panels.



PART# TYPE

CV16 CLEANER, PROTECTANT, POLISH
AGC CLEANER

REJEX SOIL BARRIER

The latest advancement in reactive chemical coatings designed to give an ultra-slick, high gloss finish that seals and protects painted surfaces, glass, metal, and acrylic.



PART#

SP-1

COCKPIT EQUIPMENT

3" METAL SWIVEL VENT

Airline-style 3" metal swivel vents are available in clear or black anodized finish. Utilizes a large opening which is very effective in warmer climates. Designed to directly replace the black plastic vents that do not seal well when closed. Simple operation by pushing and turning the knurled barrel counterclockwise to open and clockwise to close. Precisely CNC machined, 6061-T6 aluminum.



PART# COLOR

SV-3BL	BLACK
SV-3GR	GRAY

GRAY SWIVEL VENT

Vent has knurled collar that swivels 60 degrees to direct air flow and volume. Manufactured from 2024-T351 aluminum and anodized in black or grey. 4 mounting holes 7/8" diameter spaced 2-3/8" apart with a mounting plate thickness of 0.71". Total diameter of vent is 2-3/4". Made in the USA.



PART# COLOR

SEV-2GR	GRAY
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POPIT-S

360 degree rotatable Motorsport, Aircraft & Marine window vent, easily turns through 360 Degrees, snaps open and shut to allow air in or out of the cockpit / cabin. Great to use in Lexan Polycarbonate race / rally car windows, Aircraft windows, Helicopter windows, Boat cabins



PART# SIZE

POPIT-S	55mm
---------	------

POPIT A-2-100

Direct replacement for SnapVent A-2-100.

Classic 360 degree rotatable air vent, fixed in open position. Non-closing.



PART# SIZE

POPIT A-2-100	2"
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POPIT-LBW

Replaces Snapvent CC3251

360 deg rotatable Motorsport, Aircraft & Marine window vent, easily turns through 360 Degrees, snaps open and shut to allow air in or out of the cockpit / cabin. Great to use in Lexan Polycarbonate race / rally car windows, Aircraft windows, Helicopter windows, Boat cabins.



PART# SIZE

POPIT-LBW	83mm
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POPIT-L

Replaces Snapvent F318

360 deg rotatable Motorsport, Aircraft & Marine window vent, easily turns through 360 Degrees, snaps open and shut to allow air in or out of the cockpit / cabin. Great to use in Lexan Polycarbonate race / rally car windows, Aircraft windows, Helicopter windows, Boat cabins.

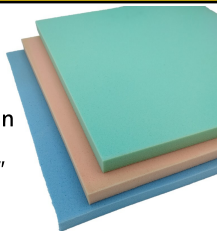


PART# SIZE

POPIT-L	83mm
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SEAT CUSHION FOAM

For every flying hour you log, you will spend more than 60 minutes sitting down. Conform seat cushions absorb up to 97% of impact dissipated. Conforms to your shape through body warmth. 1" thick x 16" x 18" precut pads in three stiffness grades. Easy to use, simply cut and sculpt to fit seat. Sheets are purchased 36" x 80" and cut into even divisible increments. Meets FAR 25.855 & FAR 25.8536



PART#	SIZE	COLOR	TYPE
19017	18" X 16" X 1"	PINK	SOFT
19018	18" X 16" X 1"	BLUE	MEDIUM
19019	18" X 16" X 1"	GREEN	FIRM
19017-FULL	36" X 80" X 1"	PINK	SOFT
19018-FULL	36" X 80" X 1"	BLUE	MEDIUM
19019-FULL	36" X 80" X 1"	GREEN	FIRM

COMPASSES, HOLE COVERS, & INCLINOMETERS

INSTRUMENT HOLE COVERS

These black ABS plastic covers are used to cover up an instrument hole after the instrument has been removed.

Pre-drilled for mounting.

4 available models.

Meets FAR 25 fire retardant requirements.



PART#	STYLE	SIZE
-------	-------	------

IHC2	STANDARD	2-1/4"
IHC3	STANDARD	3-1/8"
IHC3-ATI	ATTITUDE	3-1/8"
IHC3-AV	ALTITUDE	3-1/8"

VERTICAL CARD MAGNETIC COMPASS

This popular dry compass offers advantages over traditional fluid compasses.

Because the sensing magnet is fixed in a horizontal plane & dampened naturally by design, the compass is inherently stable; overswing is minimized or eliminated. The entire sweep of the horizon is visualized in relation to the aircraft heading.



PART#	ITEM
-------	------

PAI700-14	14 V COMPASS
PACMG-2	DECK BRACKET

INCLINOMETER

These small inclinometers are ideal for installing on an already set up panel.



PART#	ANGLE
-------	-------

6AC	6°
1576S	15°

COMPASS REPAIR KIT

Kit contains diaphragm, deviation card, bezel sealing gasket, & bezel spacer gasket. Available with or without compass fluid.



PART#	ITEM
-------	------

C21-KIT	KIT WITHOUT FLUID
C21-KITCF	KIT WITH FLUID
C21-100	DIAPHRAGM

AIRPATH COMPASS & ACCESSORIES

2-1/4" wet compass. Provided with a deviation card, card window, and a card-holder easily mounted near the compass for easy reference.



PART#	ITEM
-------	------

C2300	COMPASS
C23-805	CARD HOLDER
C23-806	CARD WINDOW
C23-807	DEVIATION CARD

COMPASS FLUID

Compass fluid. Sold in half pints, pints, and gallons.



PART#	SIZE
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AP4000-HPT	HALF PINT
AP4000-PT	PINT
AP4000-G	GALLON

COMPOSITES & FINISHING MATERIALS

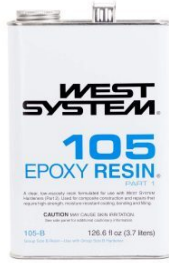
WEST SYSTEM

WEST SYSTEM 105 Epoxy Resin and Hardeners make up a versatile epoxy system that can be used for everything from basic, long-lasting repairs to the construction of high-performance composites. When blended at the appropriate mix ratio, WEST SYSTEM Epoxy Resin and Hardeners will cure to a high-strength plastic solid at 72°F. The resulting plastic adheres tenaciously to a wide range of materials including woods, fiberglass and other reinforcing materials, and metals. Select from a range of hardeners and additives to tailor your epoxy mixture's handling characteristics and cured physical properties to suit your working conditions and specific coating or bonding application.

WEST SYSTEM Epoxy resin and hardeners are packaged in three "Group Sizes." For each container size of resin, there is a corresponding sized container of hardener. When purchasing epoxy resin and hardeners, be sure both containers are labeled with the same group size letter: A, B, C, or E.

WEST SYSTEM 105 RESIN

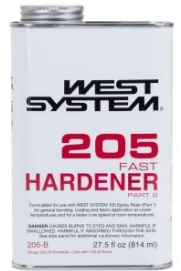
105 Epoxy Resin is the base material on which all WEST SYSTEM 105 System epoxy compounds are built. It is a clear, pale yellow, low-viscosity liquid epoxy resin. Blended with hardener at the proper ratio, it cures to a hard, solid plastic with superior physical properties. Based on which hardener you choose, it cures to a wide range of temperatures.



PART#	SIZE
105-A	QUART
105-B	GALLON
105-C	5 GALLON

205 FAST HARDENER

205 Fast Hardener is a medium-viscosity epoxy curing agent. It is useful in a majority of bonding situations, and at lower temperatures. 205 Fast Hardener produces a rapid epoxy cure that develops physical properties quickly at room temperature. Mix it with WEST SYSTEM 105 Resin in a five-part resin to one-part hardener ratio. The resulting cured epoxy is a rigid, high-strength, moisture-resistant solid. The combination of 105 Resin/205 Fast Hardener has excellent bonding and coating properties.



PART#	SIZE
205-A	PINT
205-B	QUART
205-C	GALLON

206 HARDENER

206 Slow Hardener is a low-viscosity epoxy curing agent for use when extended working time or a longer cure time is needed. It also provides adequate working time at higher shop temperatures. When combined with 105 Resin in a five-part epoxy resin to one-part hardener ratio, the cured resin/206 Slow Hardener mixture yields a rigid, high-strength, moisture-resistant solid with excellent bonding and barrier coating properties.



PART#	SIZE
206-A	PINT
206-B	QUART
206-C	GALLON

207 SPECIAL CLEAR HARDENER

Blush-free 207 Special Clear Hardener was developed for coating and fiberglass cloth application where an exceptionally clear, moisture-resistant, natural wood finish is desired. Blended with 105 Epoxy Resin, 207 Hardener will not blush or turn cloudy in humid conditions. It has excellent compatibility with paints and varnishes. An ultraviolet inhibitor in 207 Special Clear Hardener helps provide a beautiful, long-lasting finish when used with quality UV filtering varnish. 105/207 cures clear and colorless.



PART#	SIZE
207-SA	PINT
207-SB	QUART
207-SC	GALLON

209 EXTRA SLOW HARDENER

209 Extra Slow Hardener is formulated for use with WEST SYSTEM 105 Resin for general coating and bonding applications in extremely warm and/or humid conditions or when extended working time is desired at room temperature. Provides approximately twice the working time of 206 Slow Hardener. Forms a clear, amber-colored solid with good physical properties and moisture resistance for bonding and coating applications.



PART#	SIZE
209-SA	PINT
209-SB	QUART
209-SC	GALLON

G/FLEX 650 TOUGHENED EPOXY

G/flex 650 is a toughened, versatile, liquid epoxy for permanent waterproof bonding of fiberglass, ceramics, metals, plastics, damp and difficult-to-bond woods. It is a bit more flexible than standard epoxies, but much stiffer than adhesive sealants. This gives it the ability to make structural bonds that can absorb the stress of expansion, contraction, shock, and vibration. It is ideal for bonding dissimilar materials.



PART#	SIZE
650-8	1/2 PINT

COMPOSITES & FINISHING MATERIALS

403 MICROFIBERS

403 Microfibers Adhesive Filler is a fine fiber blend. Use it to thicken epoxy blended resin/hardener and create a multi-purpose adhesive. Epoxy thickened with microfibers has good gap-filling qualities but will still do an excellent job of wetting-out/penetrating into wood fibers. You can blend it into any WEST SYSTEM 105 Resin/20X Hardener combination, G/flex Epoxy 650, or G/5 Five-Minute Adhesive. Blended with epoxy, it will cure to an off-white color.



PART#	SIZE
-------	------

403-9	6 OZ
403-28	20 OZ

410 MICROLIGHT

410 Microlight is the ideal low-density filler. When you blend it with epoxy, it creates a light, easily worked epoxy fairing compound. Formulated to mix into epoxy more easily than typical fairing fillers. After epoxy thickened with 410 cures, it is about 30% easier to sand than most other epoxy-based fairing compounds. Epoxy thickened with Microlight feathers to a fine edge. Not recommend for use under dark paint, or other surfaces subject to high temperatures.



PART#	SIZE
-------	------

410-2	1.7 OZ
410-7	4.3 OZ

406 COLLOIDAL SILICA

406 Colloidal Silica is an epoxy thickening additive used to control the viscosity of the epoxy. It prevents epoxy runoff in vertical and overhead joints. This is a very strong filler. It creates a smooth mixture, ideal for general epoxy bonding and filleting. It is also our most versatile epoxy filler. Often used in combination with other fillers, 406 can be used to improve strength, abrasion resistance, and consistency of epoxy fairing compounds. The result is a tougher, smoother surface.



PART#	SIZE
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406-7	5.5 OZ
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502 BLACK PIGMENT

502 Black Pigment is an epoxy-based liquid colorant used to tint the epoxy mixture black, providing an even, black color base for the final finish system. Colored surfaces also tend to highlight flaws and imperfections. Add to the mixed resin/hardener at a rate of approximately one teaspoon of pigment to 8 fl oz of epoxy. More pigments will increase opaqueness and mixture viscosity. One 4 fl oz bottle will tint approximately 1.5 gal of epoxy.



PART#	SIZE
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502	4 OZ
-----	------

501 WHITE PIGMENT

501 White Pigment is an epoxy-based liquid colorant used to tint the epoxy mixture white, providing an even, white color base for the final finish system. Colored surfaces also tend to highlight flaws and imperfections. Add to the mixed resin/hardener at a rate of approximately one teaspoon of pigment to 8 fl oz of epoxy. More pigments will increase opaqueness and mixture viscosity. One 4 fl oz bottle will tint approximately 1.5 gal of epoxy.



PART#	SIZE
-------	------

501	4 OZ
-----	------

503 GRAY PIGMENT

503 Gray Pigment is an epoxy-based liquid colorant used to tint the epoxy mixture gray, providing an even, gray color base for the final finish system. Colored surfaces also tend to highlight flaws and imperfections. Add to the mixed resin/hardener at a rate of approximately one teaspoon of pigment to 8 fl oz of epoxy. More pigments will increase opaqueness and mixture viscosity. One 4 fl oz bottle will tint approximately 1.5 gal of epoxy.



PART#	SIZE
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503	4 OZ
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COMPOSITES & FINISHING MATERIALS

ALUMINUM POWDER

420 Aluminum Powder will increase the hardness and abrasion resistance of the coated surface and improve its moisture resistance. 420 provides limited protection from ultraviolet light. Cures to a metallic gray color. Add to mixed resin/hardener at the rate of 5%-10% by volume or 1.5 tablespoons per 8 fl oz of epoxy (10 strokes each of resin and hardener from 300Mini Pumps). 36 oz of 420 will modify up to five gallons of mixed epoxy.



PART#	SIZE
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420	36OZ
-----	------

BARRIER COAT ADDITIVE

422 is used as a barrier coating additive to help prevent gelcoat blistering in polyester fiberglass boats. 422 also increases the epoxy's abrasion resistance. Cures to a light gray color. Add to mixed resin/hardener at the rate of 15 to 20% by volume or 3 tablespoons per 8 fl oz of epoxy. 16 oz can of 422 will modify approximately half a gallon of mixed epoxy.

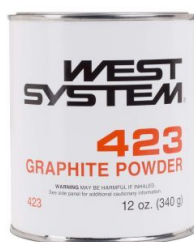


PART#	SIZE
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422	16OZ
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GRAPHITE POWDER

423 Graphite Powder is a fine black powder that can be mixed with epoxy to produce a low-friction exterior coating with increased scuff resistance and durability. It does not provide anti-fouling qualities. The epoxy/graphite mixture cures to a black color. Add to mixed resin/hardener at the rate of 10% by volume or 1.5 tablespoons per 8 fl oz. of epoxy. 12 oz can of 423 will modify approximately one gallon of epoxy.



PART#	SIZE
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423	12OZ
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PLASTIC BOAT REPAIR KIT

Repair splits, cracks and small holes in plastic canoes, kayaks and other small boats made from HDPE, LDPE, ABS, PVC or polycarbonate plastic with the contents of this kit. Each kit contains 8.4 ounces of pre-thickened G/flex epoxy, protective gloves, mixing pallets and reusable mixing sticks. Illustrated, detailed instructions explain how to repair splits and cracks in plastic boats, attach or repair reinforcement points on inflatable boats, and repair pinhole leaks in inflatables.



PART#

655-K

ALUMINUM BOAT REPAIR KIT

Repair the most common problem with aluminum boats and canoes: leaking seams and rivets in aluminum boats with the Aluminum Boat Repair Kit. Each kit contains 8 ounces of G/flex 650 Toughened Epoxy, adhesive filler, application syringes, mixing pots and reusable mixing sticks and protective gloves. Illustrated, detailed instructions explain how to repair leaking seams and rivets in aluminum boats.



PART#

650-K

610 THICKENED EPOXY

Six10 Thickened Epoxy Adhesive combines the strength, reliability and excellent physical properties of a two-part WEST SYSTEM Epoxy with point-and-shoot convenience. The self-metering coaxial cartridge dispenses a gap-filling structural epoxy that bonds tenaciously to wood, metals, fiberglass and concrete. The tube comes with a static mixer that lets you lay down a bead of thickened epoxy with any standard caulking gun.



PART#	SIZE
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610	190ML
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COMPOSITES & FINISHING MATERIALS

T-88 EPOXY

T-88 is a high-performance, non-brittle, two-part epoxy adhesive designed to give superior results under adverse conditions. The adhesive may be used without modifications in normally fitted joints, and will cure in any thickness without shrinkage. T-88 is clear amber and becomes virtually invisible when varnished. T-88 exhibits outstanding adhesion and permanence on a wide variety of materials, and is endorsed by leading designers, builders, and organizations.



PART#	SIZE
T-88-1/2PT	8OZ
T-88-PT	16OZ
T-88-QT	32OZ
T-88-GAL	128OZ

POLYETHYLENE SYRINGE

These ungraduated tapered tip syringes are useful in applying epoxy in hard-to-reach areas. Size 10cc



PART#

SYR10

AEROPOXY SYSTEM

PR3660/2032 PR2032 Resin & Hardener is a medium viscosity, unfilled, light amber laminating resin that is designed for structural production applications. When used with PH3660 hardener, the system gives excellent wet-out of fiberglass, carbon and aramid fibers. Special additives have been incorporated into this system to promote chemical adhesion to fabrics made with these fibers. Typical applications include aircraft, sailplane skins, auto bodies, radomes, and prototype parts. Cure time: at least 24 hours, at a minimum temperature of 72° F, before moving the structure. Pot life (4 oz): 3630: 30 minutes 3660: 60-65 minutes, 3665: 120-140 minutes. Mix ratio: 100 parts PR2032 to 27 parts 3660, by weight or 3 parts PR2032 to 1 part PH3660 by volume.



PART#	SIZE	TYPE
2032-QT	QUART	RESIN
2032-3/4G	3/4 GALLON	RESIN
2032-5G	5 GALLON	RESIN
3630-QT	QUART	SUPER FAST
3660-PT	PINT	FAST
3660-QT	QUART	FAST
3660-2-1/2G	13 POUNDS	FAST
3665-QT	QUART	SLOW
3665-2-1/2G	13 POUNDS	SLOW

AEROPOXY LIGHT

Two component light tan paste epoxy filler compound for foam, wood, fiberglass, and other surfaces. Can be brought to a smooth feathered edge and once cured, is easy to sand. Pot life 25-30 minutes. Mix ratio is 100:50 by weight or 2 to 1 by volume. Cure time @ 77°F: to shape 2-3 hours, to sand 5-6 hours, full cure 24 hours.



PART#	SIZE
LIGHT-QT	QUART
LIGHT-GAL	GALLON

INSTAFOAM

When the two components are mixed in equal volume, they expand into a rigid closed cell foam of 2.1 lb nominal density; expanding approximately 30 to 1 depending on temperature. Thorough mixing of the two components is essential. Small-batch mixes are recommended. Cured foams can be easily trimmed, cut and shaped with common woodworking tools. Use toluene or MEK for cleanup. Meets MIL-P-21929B Cls I.



PART#	SIZE
INSTFM-1/2G	1/2 GALLON
INSTFM-1	1 GALLON
INSTFM-3	3 GALLON

COMPOSITES & FINISHING MATERIALS

COTTON FLOCK

Often referred to as "flox". Flox is mixed in much the same way as dry micro but only about two parts flock to one part epoxy is required. Mix in just enough flock to make the mixture stand up. If "wet flox" is called out, mix it so it will not sag or run. "Flox" is often used to reinforce sharp corners to give more structural integrity. The flox corner is done just before one glass surface is applied for a wet bond to one surface.



PART#	SIZE
902	GALLON

GLASS BUBBLES

Glass Bubbles K20 are engineered hollow glass spheres made from water-resistant and chemically-stable soda-lime borosilicate glass. K20 glass bubbles are water and oil resistant, providing better utility in underwater applications. Additionally, they are non-combustible and non-porous, so they do not absorb resin; and their low alkalinity makes this product compatible with most resins while providing a stable viscosity and a long shelf life.



PART#	SIZE
B23/500	GALLON

CABOSIL

Cabosil is a fumed silicone dioxide and is used to modify the flow properties of epoxy to keep it from sagging when used on vertical surfaces. Does not change the properties of the epoxy.



PART#	SIZE
M5	GALLON

MILLED GLASS

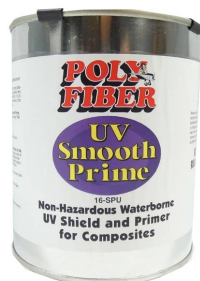
Use as a strengthened filler with epoxies. Quite heavy, 1-lb. is equal to approximately 1 cup measurement.



PART#	SIZE
MLD-GLS	1 POUND

SMOOTH PRIME UV PRIMER

Pinhole killer. Waterborne polyurethane primer applied with a foam roller or spray gun. Fills pinholes in layups or molded parts. White color. Dry sand for a smooth, pinhole-free surface. Dries in 20 minutes, sand in two hours. Clean up with water. Three gallons required for most composite aircraft.



PART#	SIZE
SP-QT	QUART
SP-GAL	GALLON

SUPERFIL EPOXY FILLER

An ultra lightweight corrosion-inhibiting filler for aircraft, marine, and automotive use. Adheres to composites, bare aluminum, steel, and bare or varnished wood. Epoxy resin with non-MDA hardener.

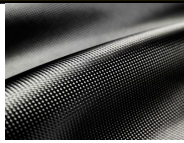


PART#	SIZE
SEFK-1	QUART
SEFK-3G	3 GALLON

COMPOSITE & FINISHING MATERIALS

CARBON FIBER CLOTH

Plain weave 5.8 oz/yd 50" wide with Kevlar tracer. 12-1/2 x 12-1/2 yarns/inch. Thickness: 0.22 mm. Sold by the yard.



PART#

282-GFT

285 KEVLAR

Crowfoot pattern. 5.0 oz/sq yard. .010 thickness. 38" wide. Sold by the yard.



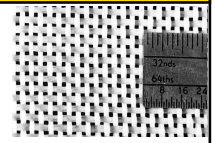
PART#

SIZE

285KV

7520 A CLOTH

Boat and tooling glass. 8.5 oz. per square yard, 50" width. Threads per inch: 18 length x 18 width. Sold per yard.

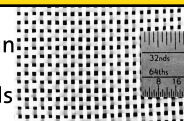


PART#

7520

3733 BOAT & TOOLING CLOTH

Boat and tooling glass fabric 5.79 oz. per sq. yd in: 60" width. As used in Dragonfly aircraft. Threads per inch: 18 length x 18 width. Price per yard.

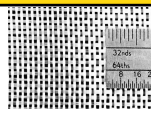


PART#

3733

1522 B CLOTH

Boat and tooling glass fabric of tight weave. 3.74 oz. per sq. yd in 50" width. As used on Dragonfly aircraft. Threads per inch: 24 length x 22 width. Price per yard.

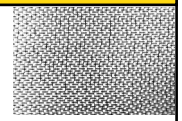


PART#

1522

120 FC CROWFOOT CLOTH

Industrial fabric with crowfoot weave. 3.16 per square yard. 38" width, 60 x 58 threads per inch. .004" thick. Price per yard.

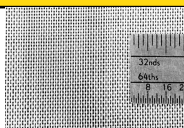


PART#

120FC

1080 DECK CLOTH

50" width, 1.45 oz. per sq. yd. threads per inch: 60 length x 47 width. Price per yard.



PART#

1080

7781 E GLASS

E cross fill fiberglass cloth, 8 harness satin weave (8HS). 50" wide, 8.9 oz per sq/yd. threads per inch 57 length x 54 width. Meets mil spec MIL-S-9084C. Price per yard.

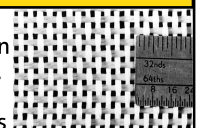


PART#

7781

7500 HEAVYWEIGHT CLOTH

Heavy weight boat and tooling glass fabric in plain weave. 9.66 oz. per sq. yd. 60" width. As used in Dragonfly aircraft. Threads per inch: 16 length x 14 width. Price per 1 yard.

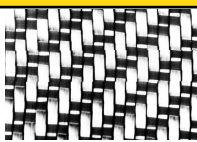


PART#

7500

5277 BIDIRECTIONAL GLASS

Bid material fabric with fibers woven in two directions for added strength. Width 38", 8.8 oz. per sq. yd. weight. "E" glass. Price per yard.

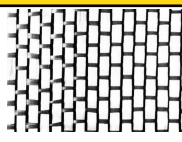


PART#

RA5277

5177 UNIDIRECTIONAL GLASS

Uni is used in areas where the primary loads are in one direction. 38" width, 7.02 oz per sq. yd weight. "E" glass. Price per yard.

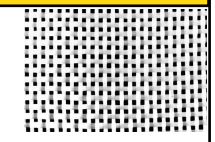


PART#

RA5177

4533 S2 WOVEN GLASS

Fills the gap in the material spectrum between conventional E glass and Kevlar. 30" width, thickness, 5.4 oz weight. Price per yard.

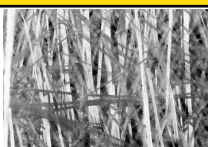


PART#

4533

102MC MAT CLOTH

Used as build up in fabricating components. 13.5 oz. per sq. yd 50" width. Mat cloth is bonded with highly soluble powdered polyester binder. Not for use with epoxy based resins. Price per yard.



PART#

102MC

ROVING "E" GLASS CLOTH

Made of parallel strands of roving glass held together with cross threads. 3" wide .025 thick, 22oz. per sq. yd. Lengthwise tensile PSI – 87,000 Lengthwise flexural PSI – 160,000. Price per yard.



PART#

1600-3

BIDIRECTIONAL FIBERGLASS TAPE

Woven from 8.7 oz bidirectional cloth, these rolls available in 4 widths with non-raveling selvage. Weave runs 90 degree to selvage edge.



PART#	WIDTH	LENGTH
1X50-FGT	1"	50yds
2X50-FGT	2"	50yds
3X50-FGT	3"	50yds
4X50-FGT	4"	50yds

COMPOSITE & FINISHING MATERIALS

WL7400 BAGGING FILM

Nylon vacuum film is .002" thick, 48" wide: v-fold. Tensile strength – 8000 psi, maximum temperature use – 390°F. Color- green/blue, shelf life – 18 months. Price is per yard.



PART#

WL740

BLB1 RELEASE FABRIC

Ply B peel ply coated with a release agent that releases all aircraft resins up to 400° F. 60" wide, 2 oz. nylon peel ply is .004 – .005 thickness. Price is per yard



PART#

BLB-1

N4 BREATHER-BLEEDER

4 oz. 60" wide, 1/8" thick polyester breather material that stretches to all contours. Should be used with release film. Maximum use temperature – 400 degree F. Price is per yard.



PART#

N4

PEEL PLY

1.8 oz woven polyester cloth 63" wide. Sold by the running yard only. Ideal for usage as peel ply. Price is per yard. This is uncertified material.

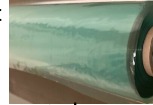


PART#

PP-63

STRETCHLON 200

High elongation elastomeric film which can be used for cures up to 250°F (121°C). An excellent choice when parts with multiple contours are to be vacuum bagged. 60" wide v-fold.



PART#

SL200

D250 BAGGING FILM

Room temperature to 200° F. Color: blue, tensile strength: 4000 psi, tear resistance: 400 ply, ultimate elongation: 430%, width: 55 inches. Price is per yard



PART#

D250

W4600B RELEASE FILM

Blue, 54" wide. Max temperature use: 400 degree F. Releases without contamination from phenolics, epoxies and polyesters. Price is per yard.



PART#

W4600B

RPB-1 NYLON FABRIC

RPB-1 is a close-weave nylon fabric that has been scoured and heat set. Weight 1.98 oz/sq yd thickness: .005in. color: white width: 60in. Price is per yard. Max temp is 350° F.



PART#

RPB-1

SEALANT TAPE

Multipurpose sealant tape that can be used for cures up to 375° F. Seals easily to metal or composite tooling. Tape is yellow, 1/8" thick by 1/2" wide, 25 ft roll



PART#

AT200Y

VACUUM VALVE

2 piece cast aluminum valve makes vacuum bag connections positive and fast. Successfully tested to 200 psi at temperatures up to 500 degrees F.



PART#

401C

QUICK DISCONNECT FITTING

Auto shut off allows your vac valve to remain under vacuum pressure when disconnected. 1/4" female NPT. Temps up to 500 degrees. Cad-plated steel.



PART#

AQD500TF

PARTALL PARTING AGENT

Wax based compound useful as a general purpose parting agent. Good for 3-5 cycles. Simply apply the paste to the mold surface, allow to dry, then buff.



PART#

SIZE

#2-12

12OZ

#2-7

7 POUNDS

PARTALL MOLD RELEASE

For brushing or spraying on molds to prevent resin from sticking. After resin is cured the film will part easily from the mold and is readily dissolved from the molded parts with water. Use after tool has been paste waxed with partall paste.



PART#

SIZE

#10

QUART

#10-5GAL

5 GALLONS

FORMULA FIVE MOLD RELEASE WAX

Formula Five Mold Release Wax is a silicone-containing paste wax mold release agent that blends carnauba – nature's most durable protection – with modern polymers and special hydrocarbon waxes.



PART#

#5-12

HI-TEMP MOLD RELEASE WAX

Partall Hi-Temp Wax is a specially formulated paste wax mold release agent produced by combining hydrocarbon and microcrystalline waxes with (PTFE). Max temp is 350° F.



PART#

HT-12

COMPOSITE & FINISHING MATERIALS

FORMULA FIVE CLEAN & GLAZE

FORMULA FIVE Clean 'N Glaze is a mild buffing compound that aids in extending the life of fiberglass molds by gently cleaning and polishing away surface buildup and residue.



PART#

CNG

VACUUM VALVE KIT

2 piece cast aluminum valve with quick disconnect fitting.



PART#

SIZE

401C-KT

VACUUM BAGGING HARDWARE KIT

Includes: 2 vacuum bagging ports, 1 pressure gauge, 1 quick release vacuum fitting with two-way shut off.



PART#

VBHK

DELUXE VACUUM BAG HARDWARE KIT

Includes: 3 vacuum bagging ports, 1 pressure gauge, 2 quick release vacuum fittings, 10 feet of 3/8" tubing and 2 barb fittings.



PART#

DVBHK

VACUUM BAGGING STARTER KIT

This kit includes everything you will need except for epoxy and a vacuum pump.



PART#

VBK

3OZ PAPER MIXING CUPS

Used for mixing small batches of epoxy. 3 oz, unwaxed paper. Sold in packages of 100.



PART#

444

8OZ PAPER MIXING CUPS

Used for mixing small batches of epoxy. 8oz, lined with polyethylene. Sold in packages of 100.



PART#

8SN1

16OZ PAPER MIXING CUPS

Used for mixing small batches of epoxy. 16oz, lined with polyethylene. Sold in packages of 100.



PART#

16SN1

MIXING STICKS

These 5/8" x 5-1/2" tongue depressors work great for mixing small batches of epoxy. 500 per box.



PART#

805

CORDLESS ELECTRIC SCISSORS

Widely used for cutting and trimming cloth, leather, Kevlar composite materials, rubber, soft plastics, and more! Portable and easy to carry, with flexible operation, while also being safe and reliable.



PART#

ITEM

D-260
D-260R

CORDLESS SCISSORS
REPLACEMENT BLADE

DISPOSABLE BRUSHES

Natural, undyed bristle brushes with smooth unpainted wood handles. Unaffected by paints, dopes, resins, thinners or solvents.



PART#

SIZE

150-WPS-1
150-WPS-2

1"
2"

NITRILE GLOVES

Ideal for people with allergic reactions to rubber latex. Offer good hand protection from solvents, fluids, grease, oils, and grime. Do Not use for protection in flammable or explosive atmosphere. Box of 100 only.



PART#

SIZE

NIT-GLOVE-L
NIT-GLOVE-XL

LARGE
EXTRA LARGE

CONTROLS

CONTROL CABLE

1 x 19 Non Flexible Cable -One strand of 19 wires. It has more metallic area than 7 x 7 or 7 x 19 cable which makes it the strongest but also the least flexible. Generally used for bracing purposes. Can be used for controls. VERY STIFF.

7 x 7 Flexible Control Cable -Seven strands of seven wires each. Used for control purposes where extreme flexibility is not required but where abrasion is a factor.

7 x 19 Extra Flexible Control Cable -Seven strands of 19 wires each. Its greater metallic area makes it stronger than 7 x 7 cable. Because of its fine wires, the best service is obtained with 7 x 19 wire where abrasion is not too severe. These same fine wires, however, make it the most flexible to meet severe bending.

CONTROL CABLE

Galvanized or stainless-steel mil spec cable. Meets MIL-DTL-53420.



PART#	TYPE	BREAK
1/16X7X7-GV	GALVANIZED	480#
3/32X7X7-GV	GALVANIZED	920#
3/32X7X19-GV	GALVANIZED	1000#
1/8X1X19-GV	GALVANIZED	2100#
1/8X7X19-GV	GALVANIZED	2000#
3/16X7X19-GV	GALVANIZED	4200#
1/4X7X19-GV	GALVANIZED	7000#
1/16X7X7-SS	STAINLESS	480#
3/32X7X7-SS	STAINLESS	920#
3/32X7X19-SS	STAINLESS	920#
1/8X1X19-SS	STAINLESS	2100#
1/8X7X19-SS	STAINLESS	1760#
3/16X7X19-SS	STAINLESS	3700#
1/4X7X19-SS	STAINLESS	6400#

NICOPRESS COPPER OVAL SLEEVES

Oval shaped copper sleeves used in making eye or lap splices in flexible cable. Sleeves are slipped over the two strands of cable to be fastened and are then compressed with a Cable Swager. Provides a bond that is even stronger than a standard splice. Plain copper and zinc coated sleeves are used with galvanized cable, and tin coated sleeves are to be used with stainless steel cable. Meets Milspec 51844.



PART#	CABLE SIZE	ALTERNATE#
18-1-C	1/16	MS51844-42
18-2-G	3/32	MS51844-43
18-3-M	1/8	MS51844-44
18-4-P	5/32	MS51844-45
18-6-X	3/16	MS51844-46
18-10-F6	1/4	MS51844-48

THIMBLES

Available in zinc coated steel or in corrosion- resisting steel. Examples: AN100-3(carbon steel), AN100-C3(stainless steel). Thimbles are made in conformance with Government procurement specification MIL-T-5677 and standard drawing AN100.



PART#	CABLE SIZE	TYPE
AN100-3	1/16 - 5/64	STEEL
AN100-C3	1/16 - 5/64	STAINLESS
AN100-4	3/32 - 7/64	STEEL
AN100-C4	3/32 - 7/64	STAINLESS
AN100-5	5/32	STEEL
AN100-C5	5/32	STAINLESS
AN100-6	3/16	STEEL
AN100-C6	3/16	STAINLESS
AN100-8	1/4	STEEL

CABLE BUSHING

Cable bushings can be used to loop cable wire and anchor it with a bolt. Used in a similar manner as the AN100 cable thimbles. made of cadmium plated steel.



PART#	CABLE SIZE	HOLE SIZE
AN111-C3	1/16 - 3/32	3/16
AN111-C4	1/8	3/16
AN111-C5	5/32	1/4
AN111-C6	3/16	5/16

NICOPRESS ZINC OVAL SLEEVES

Oval shaped copper sleeves used in making eye or lap splices in flexible cable. Sleeves are slipped over the two strands of cable to be fastened and are then compressed with a Cable Swager. Provides a bond that is even stronger than a standard splice. Meets Milspec 51844.



PART#	CABLE SIZE	ALTERNATE #
28-1-C	1/16	MS51844-22
28-2-G	3/32	MS51844-23
28-3-M	1/8	MS51844-24
28-4-P	5/32	MS51844-25
28-6-X	3/16	MS51844-26
28-5-V	5/32	
28-8-V	1/4	

CONTROLS

NICOPRESS TINNED OVAL SLEEVES

Oval shaped copper sleeves used in making eye or lap splices in flexible cable. Sleeves are slipped over the two strands of cable to be fastened and are then compressed with a Cable Swager. Provides a bond that is even stronger than a standard splice. Plain copper and zinc coated sleeves are used with galvanized cable, and tin coated sleeves are to be used with stainless steel cable. Meets Milspec 51844.



PART#	CABLE SIZE	ALTERNATE #
428-2-VM	1/16	MS51844-82
428-3-VM	3/32	MS51844-83
428-4-VM	1/8	MS51844-84
428-5-VM	5/32	MS51844-85
428-6-VM	3/16	MS51844-86
428-8-VM	1/4	MS51844-88

NICOPRESS COPPER STOP SLEEVES

These copper stop sleeves are used on the ends of cables that provides a reliable connection point that prevents the wire rope from unraveling, fraying, or slipping out. They are compressed onto the wire with a Cable Swager. Plain copper and zinc coated sleeves are used with galvanized cable, and tin coated sleeves are to be used with stainless steel cable.



PART#	CABLE SIZE
871-1-C	1/16
871-17-J	3/32
871-18-J	1/8
871-19-M	5/32

COMPOUND CABLE SWAGER

This quality tool is a great alternative to the more expensive cable swagers. Compound action doubles the force so that you can make perfect swages with less effort. Features a built-in cable cutter that will cut up to 1/4" cables. Swages standard AN copper, zinc, and steel oval and stop Nicopress Sleeves. 24" overall length. Not for stainless steel sleeves. Swage sizes: 1/16", 3/32", 1/8", 5/32", and 3/16". Includes Go-No-Go Gauge.



PART#

JPS24

CABLE DIAMETER GAUGE

Quickly and accurately measure standard cable diameters. Measures 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16" and 3/8".



PART#

ATSGAP4

WIRE GRIP

This device, with its' unique 'in vice' gripping action, attaches securely to the core wire of any std push/pull control. The 5/8" long 10-32 threaded end is screwed onto a clevis, ball joint or other hardware used for linkage to mixture, curb air heat, cabin air, etc., resulting in a secure, clean looking job. 125 lb rating. Sizes for 2 wire dia ranges available.



PART# WIRE SIZE

WG-1	.050 - .062
WG-2	.078

CABLE FAIRLEADS

Nylon construction for internal or external use. Made in two halves with circular wire retaining clip. Can be installed or removed with cable in position.



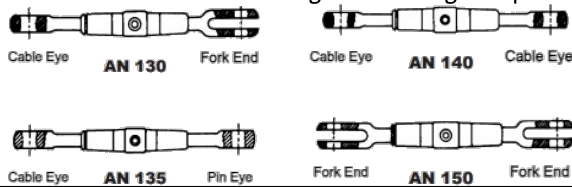
PART# LENGTH I.D. O.D.

40071-00	1/2"	1/2"	3/4"
40701-00	3/4"	1/4"	3/4"

CONTROLS

AN TURNBUCKLE ASSEMBLY

Complete turnbuckle assemblies consist of a brass barrel and two steel ends, one with right-hand thread and the other with left-hand thread. Order by proper AN number and add dash number and a letter to indicate length and strength required.



PART#	LENGTH	STRENGTH
AN130-8S	4-1/2"	800
AN130-16S	4-1/2"	1600
AN130-22S	4-1/2"	2200
AN130-32S	4-1/2"	3200
AN130-32L	8"	3200
AN135-16S	4-1/2"	1600
AN135-16L	8"	1600
AN135-22S	4-1/2"	2200
AN135-32S	4-1/2"	3200
AN135-46L	8"	4600
AN140-8S	4-1/2"	800
AN140-16S	4-1/2"	1600
AN140-16L	8"	1600
AN140-22S	4-1/2"	2200
AN140-32S	4-1/2"	3200
AN140-32L	8"	3200
AN140-46L	8"	4600
AN150-8S	4-1/2"	800
AN150-16S	8"	1600
AN150-16L	8"	1600
AN150-22S	4-1/2"	2200
AN150-22L	8"	2200
AN150-32S	4-1/2"	3200
AN150-32L	8"	3200
AN150-46L	8"	4600

AN155 TURNBUCKLE BARREL

Turnbuckle barrels are made of brass and conform to procurement spec. MIL-T5685. Barrels are available in long or short versions. Each barrel has left threads on one end and right threads on the other.



PART#	LENGTH	THREAD
AN155-8S	2-1/4"	6-40
AN155-8L	4"	6-40
AN155-16S	2-1/4"	10-32
AN155-16L	4"	10-32
AN155-32S	2-1/4"	1/4-28
AN155-32L	4"	1/4-28
AN155-46S	2-1/4"	5/16-24
AN155-46L	4"	5/16-24

AN161 TURNBUCKLE FORK

Turnbuckle forks are made of cadmium plated steel and conform to procurement spec. MIL-T-5685. Forks are available in both short and long versions, as well as with left and right threads.



PART#	LENGTH	THREAD	HOLE I.D.	FORK I.D.
AN161-8LS	1-1/2"	6-40 LEFT	3/16	0.109
AN161-8RS	1-1/2"	6-40 RIGHT	3/16	0.109
AN161-16LS	1-5/8"	10-32 LEFT	3/16	0.156
AN161-16LL	2-1/2"	10-32 LEFT	3/16	0.156
AN161-16RS	1-5/8"	10-32 RIGHT	3/16	0.156
AN161-16RL	2-1/2"	10-32 RIGHT	3/16	0.156
AN161-22LS	1-7/8"	1/4-28 LEFT	3/16	0.188
AN161-22LL	2-3/4"	1/4-28 LEFT	3/16	0.188
AN161-22RS	1-7/8"	1/4-28 RIGHT	3/16	0.188
AN161-22RL	2-3/4"	1/4-28 RIGHT	3/16	0.188
AN161-32LS	1-7/8"	1/4-28 LEFT	1/4	0.218
AN161-32LL	2-3/4"	1/4-28 LEFT	1/4	0.218
AN161-32RS	1-7/8"	1/4-28 RIGHT	1/4	0.218
AN161-32RL	2-3/4"	1/4-28 RIGHT	1/4	0.218
AN161-46LS	2"	5/16-24 LEFT	5/16	0.250
AN161-46RS	2"	5/16-24 RIGHT	5/16	0.250
AN161-46RL	3"	5/16-24 RIGHT	5/16	0.250

AN170 TURNBUCKLE CABLE EYE

Turnbuckle cable ends are made of cadmium plated steel and conform to procurement spec. MIL-T-5685. Cable ends are available in both short and long versions, as well as with left and right threads.



PART#	LENGTH	THREAD	HOLE I.D.
AN170-8LS	1-1/2"	6-40 LEFT	.188
AN170-8RS	1-1/2"	6-40 RIGHT	.188
AN170-16LS	1-5/8"	10-32 LEFT	.219
AN170-16LL	2-1/2"	10-32 LEFT	.219
AN170-16RS	1-5/8"	10-32 RIGHT	.219
AN170-16RL	2-1/2"	10-32 RIGHT	.219
AN170-22LS	1-3/4"	1/4-28 LEFT	.219
AN170-22LL	2-5/8"	1/4-28 LEFT	.219
AN170-22RS	1-3/4"	1/4-28 RIGHT	.219
AN170-22RL	2-5/8"	1/4-28 RIGHT	.219
AN170-32LS	1-3/4"	1/4-28 LEFT	.281
AN170-32LL	2-5/8"	1/4-28 LEFT	.281
AN170-32RS	1-3/4"	1/4-28 RIGHT	.281
AN170-32RL	2-5/8"	1/4-28 RIGHT	.281
AN170-46LL	2-3/4"	5/16-24 LEFT	.313
AN170-46RL	2-3/4"	5/16-24 RIGHT	.313

CONTROLS

AN165 TURNBUCKLE PIN EYE

Turnbuckle pins are made of cadmium plated steel and conform to Procurement Spec. MIL-T-5685. Pins are available in both short and long versions, as well as with left and right threads.



PART#	LENGTH	THREAD	HOLE I.D.
AN165-8LS	1-1/2"	6-40 LEFT	.188
AN165-8RS	1-1/2"	6-40 RIGHT	.188
AN165-16LS	1-5/8"	10-32 LEFT	.188
AN165-16LL	2-1/2"	10-32 LEFT	.188
AN165-16RS	1-5/8"	10-32 RIGHT	.188
AN165-16RL	2-1/2"	10-32 RIGHT	.188
AN165-22LS	1-3/4"	1/4-28 LEFT	.188
AN165-22LL	2-5/8"	1/4-28 LEFT	.188
AN165-22RS	1-3/4"	1/4-28 RIGHT	.188
AN165-22RL	2-5/8"	1/4-28 RIGHT	.188
AN165-32LS	1-3/4"	1/4-28 LEFT	.250
AN165-32LL	2-5/8"	1/4-28 LEFT	.250
AN165-32RS	1-3/4"	1/4-28 RIGHT	.250
AN165-32RL	2-5/8"	1/4-28 RIGHT	.250

CLIP LOCKING TURNBUCKLE FORK

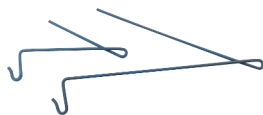
Clip-Locking Turnbuckles utilize two locking clips instead of lock wire for safe tying. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved end of the locking clips expand and latch in the vertical slot in the center of the barrel. For use with Clip Locking Cable Eye, Clip Locking Pin Eye, & Clip Locking Fork.



PART#	THREAD	STRENGTH
MS21252-2L	6-40 LEFT	800
MS21252-2R	6-40 RIGHT	1600
MS21252-3L	10-32 LEFT	2200
MS21252-3R	10-32 RIGHT	3200
MS21252-4L	1/4-28 LEFT	3200
MS21252-4R	1/4-28 RIGHT	1600
MS21252-5L	5/16-24 LEFT	1600
MS21252-5R	5/16-24 RIGHT	2200
MS21252-6L	5/16-24 LEFT	3200
MS21252-6R	5/16-24 RIGHT	4600

TURNBUCKLE CLIPS

Clips for locking turnbuckles.



PART#	TYPE
MS21256-1	SHORT
MS21256-2	LONG

CLIP LOCKING TURNBUCKLE BARREL

Clip-Locking Turnbuckles utilize two locking clips instead of lock wire for safe tying. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved end of the locking clips expand and latch in the vertical slot in the center of the barrel. For use with Clip Locking Cable Eye, Clip Locking Pin Eye, and Clip Locking Fork.



PART#	LENGTH	THREAD
MS21251-B2S	2-1/4"	6-40
MS21251-B2L	4"	6-40
MS21251-B3S	2-1/4"	10-32
MS21251-B3L	4"	10-32
MS21251-B5S	2-1/4"	1/4-28
MS21251-B5L	4"	1/4-28

CLIP LOCKING TURNBUCKLE CABLE EYE

Clip-Locking Turnbuckles utilize two locking clips instead of lock wire for safe tying. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved end of the locking clips expand and latch in the vertical slot in the center of the barrel. For use with Clip Locking Cable Eye, Clip Locking Pin Eye, & Clip Locking Fork.



PART#	STRENGTH	THREAD
MS21255-2LS	800	6-40 LEFT
MS21255-2RS	800	6-40 RIGHT
MS21255-3LS	1600	10-32 LEFT
MS21255-3RS	1600	10-32 RIGHT
MS21255-5LS	3200	1/4-28 LEFT
MS21255-5RS	3200	1/4-28 RIGHT

CLIP LOCKING TURNBUCKLE PIN EYE

Clip-Locking Turnbuckles utilize two locking clips instead of lock wire for safe tying. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved end of the locking clips expand and latch in the vertical slot in the center of the barrel. For use with Clip Locking Cable Eye, Clip Locking Pin Eye, & Clip Locking Fork.



PART#	STRENGTH	THREAD
MS21254-2LS	800	6-40 LEFT
MS21254-2RS	800	6-40 RIGHT
MS21254-3LS	1600	10-32 LEFT
MS21254-3RS	1600	10-32 RIGHT
MS21254-5LS	3200	1/4-28 LEFT
MS21254-5RS	3200	1/4-28 RIGHT

CONTROLS

A750 VERNIER CONTROL

10-32 threaded shaft for use with ball joint or AN665-21R threaded terminal. Unique ball socket construction permits the threaded end to swivel 8° in any direction. Available in black, red, or blue knob colors. Teflon lined cable.



PART#	COLOR	LENGTH
A750-BLACK 36	BLACK	36"
A750-BLACK 48	BLACK	48"
A750-BLACK 60	BLACK	60"
A750-BLACK 72	BLACK	72"
A750-BLACK 96	BLACK	96"
A750-RED 48	RED	48"
A750-RED 60	RED	60"
A750-RED 72	RED	72"
A750-BLUE48	BLUE	48"
A750-BLUE60	BLUE	60"
A750-BLUE72	BLUE	72"
A750-BLUE96	BLUE	96"

A740 RATCHET CONTROL

Simple push-pull ratchet design provides indented positions under vibration conditions. Control has 3/8-24 UNF threads with a .050" diameter stainless steel straight wire end. Maximum travel 3". Polyethylene lined cable. Not FAA approved.



PART#	COLOR	LENGTH
A740-BLACK	BLACK	96"
A740-RED	RED	96"

A820 FRICTION LOCK CONTROL

Provides positive lock throughout selected power settings by turning the chrome collet locking nut. Maximum travel is 3". Requires 1/2" panel mounting hole. Stainless steel 0.078 inner core with Teflon lined outer casing. Not FAA Approved – for experimental use only.



PART#	COLOR	LENGTH
A820-BLACK	BLACK	96"

A700 BUTTON LOCK CONTROL

Provides a 10-lb. locking force for light and medium service application. Controls have chrome face plate, 7/16- 20 UNF-2A threads with .062" diameter stainless steel wire core in flexible metal casing. Maximum travel 3". Polyethylene lined cable. Not FAA approved. 96" long.



PART#	COLOR	LENGTH
A700-BLACK	BLACK	96"
A700-RED	RED	96"

A790 VERNIER CONTROL

Control has 3/4-16 UNF-2A thread, and .078" diameter stainless steel wire core. Controls are 96" long, and can be cut to length. Available with Black or Red knobs. Has internal extruded teflon liner.



PART#	COLOR	LENGTH
A790-BLACK	BLACK	96"
A790-RED	RED	96"

A920 PUSH PULL CONTROL

10-32 threaded ends with 8° swivel, 3-3/8" stroke. This control has flexible metal casing designed for use with throttle quadrants. Teflon lined cable. Not FAA approved.



PART#	LENGTH
A920-36	36"
A920-48	48"
A920-60	60"
A920-72	72"
A920-96	96"

A730 PUSH PULL CONTROL

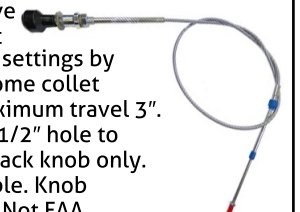
3/8-24 UNF threads and a 0.050" diameter straight stainless steel solid wire end features simple design for push-pull operation with low friction characteristics. Wire end has 3/16" o.d. Controls are 96" long, customer cuts to length desired. Maximum travel 3". Available in black or red plastic knob. Polyethylene lined cable. Knob diameter 1-1/8". Not FAA approved.



PART#	COLOR	LENGTH
A730-RED	RED	96"
A730-BLACK	BLACK	96"

A800 FRICTION LOCK CONTROL

Provides positive lock throughout selected power settings by turning the chrome collet locking nut. Maximum travel 3". .078 wire. Drill 1/2" hole to panel mount. Black knob only. Teflon lined cable. Knob diameter 1.35". Not FAA approved.



PART#	LENGTH	COLOR
A800-BLACK 36	36"	BLACK
A800-BLACK 48	48"	BLACK
A800-BLACK 60	60"	BLACK
A800-BLACK 72	72"	BLACK

A970 VERNIER CONTROL

1/4-28 threaded non-swiveling end has black heat shrunk cover over casing. Teflon lined cable. Knob diameter 1-11/32"



PART#	COLOR	LENGTH
A970-BLACK 60	BLACK	60"
A970-RED 36	RED	36"
A970-RED 96	RED	96"

CONTROLS

BUTTON LOCK T HANDLE

Provides a 10-lb locking force for light and medium service application. Controls have chrome face plate,

7/16-20 UNF-2A threads with .062" diameter stainless steel wire core in flexible metal casing. Controls are 96" long, customer cuts to length desired. Maximum travel 3". Polyethylene lined cable. T-handle is 2.3" x 0.54"



PART#	COLOR	LENGTH
A1840-BLACK	BLACK	96"

T-HOOD CONTROL

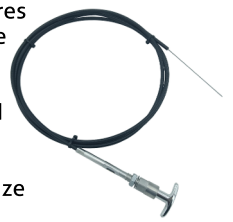
Non locking positive action control for small to mid-size engine throttles, governors, chokes, fuel shut offs and more. Aluminum body assures rust free performance, with acetal locking bushing to provide setting with one third operator effort. Has a 2" knob with travel length of 2-1/2", thread size 3/8- 24, length 1/2" galvanized 3/16" steel conduit with black vinyl covering. Wire size: .054"



PART#	LENGTH
8367	180"

T-LOCKING CONTROL

Aluminum body assures rust free performance with acetal locking bushing to provide setting with one third operator effort. Has a 2" knob with travel length of 3", thread size 7/16-20, length 3/4", galvanized 3/16" steel conduit with black vinyl covering. 126" from nut to wire end.



PART#	LENGTH
8370	126"

MUSIC WIRE

This production is made of high tensile strength carbon; can be wrapped around itself with no signs of cracking. Used in making springs for tools and die makers. Good for factory and machine shop use. Conforms to specifications for ASTM



PART#	GAUGE	DECIMAL
21024	10	0.024
21055	24	0.055
21075	29	0.075
21090	32	0.090

CABLE HOUSING

Features a black vinyl cover and a wound metal inner jacket lined with Teflon for smooth operation. For use in constructing control cable assemblies with flexible aircraft cable.



PART#	I.D.	O.D.
739-100	0.065	0.1930
739-300	0.095	0.2678

CABLE SHACKLES

These cable shackles are made of cadmium plated steel and conform to Procurement Spec. MIL-DTL-781.



PART#	HOLE	I.D.	O.D.
AN115-8	3/16"	0.109	1/4"
AN115-21	3/16"	0.150	5/16"
AN115-32	1/4"	0.203	7/16"

STRAIGHT OILITE BRONZE BUSHINGS

These bronze bushings are oil-impregnated which feature self-lubrication during use, which in turn promotes a long service life of the part.



PART#	I.D.	O.D.	LENGTH
AA304-20	1/4"	3/8"	1"
AA309-5	3/16"	5/16"	3/4"
B610-6	3/8"	5/8"	3/4"
B812-6	1/2"	3/4"	3/4"
B812-7	1/2"	3/4"	7/8"
SS610-6	3/16"	5/16"	3/8"
SS610-8	3/16"	5/16"	1/2"

GREASE FITTINGS

These fittings are made of cadmium plated steel and conform to MIL-F-3541 specifications. The fittings in this series have spring-loaded ball check in the tip. All have a tapered thread of 1/4-28, and a thread length of 0.109 inches.



PART#	LENGTH	STYLE
MS15001-1	1/2"	STRAIGHT
MS15001-3	13/16"	45 DEGREE
MS15001-4	25/32"	90 DEGREE

GREASE CAPS

Made of low-density polyethylene, these caps fit securely over the grease fittings to seal out dirt and moisture. The retaining ring keeps the cap in place during servicing. Sold in packages of 25 only. Available in red or blue.



PART#	COLOR
GC-BLUE	BLUE
GC-RED	RED

CONTROLS

PHENOLIC CABLE PULLEYS

All three types are nonmetallic (phenolic).
A223/A224 -Plain phenolic bore are used as guide and secondary control pulley in production aircraft. AN210: Similar to MS24566, but have metal shielded bearings rather than removable composition seal type bearings. MS20219: Nonmetallic sheave and fixed ball bearing. MS20220: Flight control pulley, non-metallic sheave and fixed ball bearing with contact seal. MS24566: Anti- friction bearing pulley.



PART#	BORE	CABLE SIZE	O.D.	WIDTH	LIMIT
A-223	1/4	1/16 - 1/8	1	0.250	
A-224	1/4	1/16 - 1/8	1-3/4	0.250	
MS20219-1	1/4	1/16 - 3/32	1-5/16	0.438	480#
MS20219-2	1/4	1/16 - 3/32	1-3/4	0.438	480#
MS20219-3	5/8	1/16 - 3/32	1-3/4	0.438	480#
MS20219-4	1/4	1/16 - 3/32	2-5/8	0.438	920#
MS20220-1	5/16	1/8 - 3/16	1-3/4	0.625	500#
MS20220-2	5/16	1/8 - 3/16	3	0.625	1680#
MS20220-3	5/16	1/8 - 3/16	4-1/4	0.625	2500#
MS20220-4	5/16	1/8 - 3/16	5-1/2	0.625	2500#
MS24566-1B	3/16	1/16 - 3/32	1-1/4	0.297	185#
MS24566-2B	3/16	1/16 - 3/32	2-1/2	0.297	500#
MS24566-3B	1/4	1/8 - 3/16	2	0.484	450#
MS24566-4B	1/4	1/8 - 3/16	3-1/2	0.484	1200#

MALE ROD END BEARINGS

Aurora male rod end bearings.



PART#	THREAD	BORE
CB-3BM-14	1/4-28 LEFT	3/16
CB-4	1/4-28 LEFT	1/4
CB-5	5/16-24 LEFT	5/16
CB-6	3/8-24 LEFT	3/8
CB-8	1/2-20 LEFT	1/2
CM-3B-14	1/4-28	3/16
CM-4	1/4-28	1/4
CM-4M	1/4-28	1/4
CM-5	5/16-24	5/16
CM-6	3/8-24	3/8
CM-8	1/2-20	1/2
GMM-3M-470	1/4-28	3/16
GMM-3M-570	5/16-24	3/16
GMM-3M-670	3/8-24	3/16
GMM-3M-680	3/8-24	3/16
GMM-4M-470	1/4-28	1/4
GMM-4M-675	3/8-24	1/4
GMM-4M-680	3/8-24	1/4
MB-3	10-32 LEFT	3/16
MB-4	1/4-28 LEFT	1/4
MB-5	5/16-24 LEFT	5/16
MB-6	3/8-24 LEFT	3/8
MM-2	6-32	1/8
MM-3	10-32	3/16
MM-3Z	10-32	3/16
MM-4	1/4-28	1/4
MM-5	5/16-24	5/16
MM-6	3/8-24	3/8
MM-8	1/2-20	1/2
XM-3	1/4-28	3/16
XM-4	5/16-24	1/4
XM-5	3/8-24	5/16

FEMALE ROD END BEARINGS

Female rod end bearings.



PART#	THREAD	BORE
CW-3B-14	1/4-28	3/16
CW-4	1/4-28	1/4
CW-5	5/16-24	5/16
CW-6	3/8-24	3/8
CW-8	1/2-20	1/2
GMW-3M-470	1/4-28	3/16
GMW-3M-480	1/4-28	3/16
GMW-3M-570	5/16-24	3/16
GMW-4M-470	1/4-28	1/4
GMW-4M-595	5/16-24	1/4
MG-3	10-32 LEFT	3/16
MG-4	1/4-28 LEFT	1/4
MG-5	5/16-24 LEFT	5/16
MG-6	3/8-24 LEFT	5/16
MW-2	6-32	1/8
MW-3	10-32	3/16
MW-3M-8	1/4-28	3/16
MW-4	1/4-28	1/4
MW-5	5/16-24	5/16
MW-6	3/8-24	3/8
MW-8	1/2-20	1/2

CW SERIES ROD ENDS

Male & female ends both same thread size. Body of low carbon steel, cad plated. The ball is sintered steel, oil impregnated, with 45° ball rotation. Stud is of low carbon steel.



PART#	THREAD
CW-3S	10-32
CW-4S	1/4-28
CW-5S	5/16-24
CW-6S	3/8-24

CM SERIES ROD END

Both ends are 1/4-28 male threads. Body of low carbon steel, cad plated. The ball is sintered steel, oil impregnated, with 45 Degree ball rotation. Stud is of low carbon steel, black oxide coated.



PART#	THREAD
CM-4S	1/4-28

ELECTRICAL EQUIPMENT

PUSH/PULL CIRCUIT BREAKER

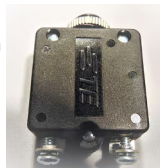
Push/Pull Circuit breakers are single pole, thermal devices. Unit may also be used as a switch. The breaker has a trip free feature which allows the contacts to open on an overload even with the toggle or button held in the ON position. The W23 will carry 100% of rated load continuously but must trip at 135% of rated load at 25° C. within one hour. Amp rating in white on black button. Attaches with 8-32 screws and washers. Approximate size: 11/16 x 1-3/8 x 2-1/8 - 3/8" hole.



P&B MODEL RATING	PART #
1 AMP	W23X1A1G-1
2 AMP	W23X1A1G-2
5 AMP	W23X1A1G-5
7.5 AMP	W23X1A1G-7.5
10 AMP	W23X1A1G-10
15 AMP	W23X1A1G-15
20 AMP	W23X1A1G-20
25 AMP	W23X1A1G-25
30 AMP	W23X1A1G-30
40 AMP	W23X1A1G-40
50 AMP	W23X1A1G-50

SCREW TERMINAL RESET BUTTON

Thermal circuit breakers feature recessed reset button which cannot be manually pulled out to disconnect the circuit. The white button has a red band around it for visible trip indication. Has 6-32 screw terminal w/lock washer. Wgt. less than 1.5 oz. 50 VDC-250 VAC. Interruption capacity is 2000 Amps at 40 VDC, 1000 amps at 350 VAC. Quick connect terminals. Approximate size: 11/16" x 1- 3/8" x 1-3/4", 1/2" hole.



P&B MODEL RATING	PART #
2 AMP	W58XC4X12A-2
3 AMP	W58XC4X12A-3
4 AMP	W58XC4X12A-4
5 AMP	W58XC4X12A-5
7 AMP	W58XC4X12A-7
10 AMP	W58XC4X12A-10
15 AMP	W58XC4X12A-15
20 AMP	W58XC4X12A-20
25 AMP	W58XC4X12A-25
30 AMP	W58XC4X12A-30

TOGGLE SWITCH COVER

Enhance your panel by replacing faded, dirty, or missing OEM toggle switch covers with these attractive vinyl covers. The four available colors also help in color coding switches for easy identification. Available in Standard and mini sizes as found on Cessna & some Beech aircraft. Colors are white (w) black (b) green (g) or red (r). (Green not available in mini size) Can be used with Toggle Switch and Miniature Toggle Switch.



SIZE	COLOR	PART #
MINIATURE	BLACK	MTSC-B
MINIATURE	RED	MTSC-R
MINIATURE	WHITE	MTSC-W
STANDARD	BLACK	TSC-B
STANDARD	GREEN	TSC-G
STANDARD	RED	TSC-R
STANDARD	WHITE	TSC-W

QUICK CONNECT CIRCUIT BREAKER

Thermal circuit breakers feature recessed reset button which cannot be manually pulled out to disconnect the circuit. The white button has a red band around it for visible trip indication. Mounting is with knurled thumb nut on bushing. Wgt. less than 1.5 oz. 50 VDC-250 VAC. Interruption capacity is 2000 Amps at 40 VDC, 1000 amps at 350 VAC. Quick connect terminals. Amp rating in red. Apx size: 11/16 x 1-3/8 x 1-7/8, 7/16" hole.



P&B MODEL RATING	PART #
1 AMP	W58XB1A4A-1
2 AMP	W58XB1A4A-2
3 AMP	W58XB1A4A-3
4 AMP	W58XB1A4A-4
5 AMP	W58XB1A4A-5
7 AMP	W58XB1A4A-7
10 AMP	W58XB1A4A-10
15 AMP	W58XB1A4A-15
20 AMP	W58XB1A4A-20
25 AMP	W58XB1A4A-25
30 AMP	W58XB1A4A-30

TOGGLE SWITCH

Feature plain toggle trip with rating marked on end. Maximum operating voltages are 50 VDC and 250 VAC (59 400Hz). Interrupt capacity is 1000 amps at 125 VAC or 2000 amps at 40 VDC. 8-32 screw terminals mounts with a single dress nut on a flattened bushing. Wgt. less than 2 oz. 2" depth x 1-3/8" height x 11/16" width, has 7/16". Can be used with Toggle Switch Cover.



P&B MODEL RATING	PART #
3 AMP	W31X2M1G-3
5 AMP	W31X2M1G-5
7.5 AMP	W31X2M1G-7.5
10 AMP	W31X2M1G-10
15 AMP	W31X2M1G-15
20 AMP	W31X2M1G-20
25 AMP	W31X2M1G-25
30 AMP	W31X2M1G-30
35 AMP	W31X2M1G-35
40 AMP	W31X2M1G-40
50 AMP	W31X2M1G-50

HEADSET PLUG

Made to specification MIL-P- 642A. Molded, cord mounting type. Screw-on shell.



Microphone plug is 3 circuit (tip, ring and sleeve), and takes JJ-033 mating jack. Headphone plug is 2 circuit (tip and sleeve), and takes JJ-034 mating jack.

DESCRIPTION	PART #
STEREO HEADPHONE	PJ-051B
HEADPHONE	PJ-055B
MICROPHONE	PJ-068

PANEL JACK

Made to Spec MIL-J-641, contact springs are of special alloys for long life; insulation is high-dielectric strength phenolic, tinned terminal lugs for easy soldering; short frame; mounts by 3/8-32 threaded bushing and nut; open circuit until plug inserted. For use with headset plug. Available in microphone jack which is 3-circuit, 1/2 oz. weight, or headphone jack which is 2-circuit, 1/3 oz. weight. Stereo is double open circuit, three conductor jack.



DESCRIPTION	PART #
STEREO HEADPHONE	SJJ-034
HEADPHONE	JJ-033
MICROPHONE	JJ-034

RG58A/U COAXIAL CABLE

Standard cable for avionics installations. **Single shielded stranded** conductor, jacket type - PVC.



DESCRIPTION	PART #
SOLD BY FOOT	RG58A/U

ELECTRICAL EQUIPMENT

UG306A/U COAX ANGLE PLUG

Right angle BNC male to Female.
Frequently purchased with
Coaxial Cable & Adapters.



DESCRIPTION	PART #
ANGLE ADAPTER	RG58A/U

UG88/U MALE COAX PLUG

Male coaxial cable plug.
Frequently purchased with
Coaxial Cable & Adapters.



DESCRIPTION	PART #
MALE PLUG	UG88/U

UG89/U FEMALE COAX PLUG

Female coaxial cable plug.
Frequently purchased with
Coaxial Cable & Adapters.



DESCRIPTION	PART #
FEMALE JACK	UG89/U

14" LOW PROFILE CABLE TIE

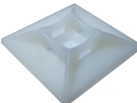
Low Profile cable ties. These cable ties have parallel entry into an ultra low profile latching head, a totally snag proof smooth exterior and a pocket that captures the trimmed stub. When applied to the bundle the flexible head conforms to the contour of the bundle, never a cut off spike to injure an installer or technician. Ties are made of nylon. Available in natural color. **Packaged in bags of 10.**



TENSILE STRENGTH	COLOR	PART #
120 LB	NATURAL	C14120LP9

4-WAY CABLE TIE MOUNT

Nylon cable tie mounting base used for securing wire bundles to flat surfaces. Insertion of cable ties may be made from all 4 sides. The mounts are attached to surfaces by means of its adhesive backing and/or a #8 screw (not incl). Size: 1.125" X 1.125"



DESCRIPTION	PART #
CABLE TIE MOUNT	ABM4

AMPER CONNECTORS, PINS & SOCKETS



DESCRIPTION	PART #
AMPER 3 SOCKETS MALE	A442
AMPER 2 PINS FEMALE	A446
MOLEX/PIPER 3 PINS	M441
MOLEX/PIPER 3 SOCKET	M442

CABLE TIE ASSORTMENT

A clear plastic containerized carrier is a very neat way for your customers to buy and store the most frequently used size and style of cable ties. The kit includes 100 each 4" 18 lb ties, the most widely used 100 each 7" 50 lb test ties and 100 each 11" 50 lb ties. The ties come in UV black or natural.



SIZES	COLOR	PART #
4", 7", 11"	BLACK	CAP400-0
4", 7", 11"	NATURAL	CAP400-9

COPPER FOIL TAPE

1/2" wide tape used for an antenna ground in composite aircraft where a large metal surface is not present. Sold per foot.



DESCRIPTION	PART #
1/2" WIDE	CFT-500

ELECTRICAL INSULATING COMPOUND

An insulating silicone compound used for producing moisture-proof seals in aircraft ignition systems, spark plug connections, and electrical terminals & assemblies. Seals & lubricates cable connectors, battery terminals, rubber door seals, and rubber & plastic O-rings. May also be used as a metal-on-plastic and metal-on-rubber assembly lubricant. Features high dielectric strength, low volatility, moisture resistant, good thermal oxidation and chemical stability, and is highly water repellent. Can be applied by hand, specially designed automated equipment, brushing or wiping. Certain designs of grease guns may seize up with silicone compounds; test prior to use. 5.3 oz tube.



DESCRIPTION	PART #
5.3 OZ	DC4

FIBERGLASS SLEEVING

A fireproof fiberglass sleeving specially designed to up to 1200F deg radiant heat-perfect for protecting 3/8" fuel line, brake lines, or wire bundles. May be coated with high temperature paint for added protection against heat and fraying. Install by pinching ends inward, slipping over line, and securing ends with clamps, ties, shrink wrap, silicone or silicone tape. Nominal ID: .574" Maximum ID: .585".



INSIDE DIAMETER	PART #
9/16"	FS9/16

FR PLUS SLEEVING

Tough, lightweight sleeving used to protect cable assemblies, hoses and wire bundles from chafing, cutting, and abrading. Retains flexibility over rated temp range of -94F to +257F. Open-weave, braided polyester construction meets F.A.R. Part 25 flammability requirements. Fray-resistant: may be cut with scissors. Sold by the linear foot.



NOMINAL O.D.	MAX O.D.	PART #
1/4"	7/16"	FRP250
1/2"	3/4"	FRP500
3/4"	1-1/4"	FRP750

HELI-TUBE SPIRAL WRAP

Heli-tube spiral wrap natural nylon is self-extinguishing. Meets UL94V-2 MIL-M- 20693B Type 1. Temperature range -121 degree F to 200 degree F. Bundle diameter range 3/16" to 2". For use in enclosed environments where the possibility of fire exists, nylon is also lightweight, and highly abrasion resistant.



O.D.	WALL THICKNESS	PART #
1/2"	.035	HT1/2N
3/8"	.035	HT3/8N
1/4"	.025	HT1/4N

TINNED COPPER BRAID

Used for static shielding on short lengths of wire or cable and for flexible bonding connections and ground straps. Made of extra flexible tinned copper wire, rolled flat. Current capacity is in free air @ 65°F. Use #858 (1/8") with 7014 thru 7025 wire, #863 (1/4") with 7026, #864 (3/8") with 7027 and #868 (1/2") with 7029.



NOMINAL FLAT WIDTH	CURRENT CAPACITY AMPS	PART #
1/8"	16	858
1/4"	32	863
3/8"	46	864
1/2"	53	868
5/8"	53	865

ELECTRICAL EQUIPMENT

HEAT SHRINK TUBING

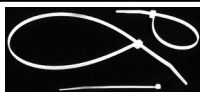
Aviation grade, polyolefin, nonflame retarded, heat shrink tubing has a wide range of applications such as harnessing, wire bundling, strain reliefs or applications where components must be insulated or packaged. Shrink by any hot air or heating device that heats to at least 250 degree. No need for special skills, one person operation complete in seconds. Black only, with 2' minimum purchase size.



EXPANDED INCHES	EXPANDED DECIMAL	MAXIMUM SIZE I.D. NOMINAL	FULLY RECOVERED WALL	PART #
3/32"	.093	.046	.020	HST-3/32
1/8"	.125	.062	.020	HST-1/8
3/16"	.187	.093	.020	HST-3/16
1/4"	.250	.125	.025	HST-1/4
3/8"	.375	.125	.025	HST-3/8
1/2"	.500	.250	.025	HST-1/2

TY-RAP

TyRap's High Performance cable ties provide industrial strength for the most demanding work.



Stainless steel locking device in the head secures tie with longer-lasting, corrosion-resistant "grip of steel". Oval, low profile head prevents snagging while pulling through bulkheads. No sharp edges to be the source of installation injuries or to damage the wire insulation. Smooth, notchless body reduces stress concentration points under tension, making the tie stronger and lower profile than notched body ties. Ribbed and stippled inner body prevents slipping on the bundle and provides infinite adjustability within the bundle range.

LENGTH	PART #
1/16" TO 3/4"	TY-523M
1/16" TO 1-3/4"	TY-525M
1/16" TO 4"	TY-528M

WAX TIE CORD

Wax coated flat Dacron tie cord used in tying up electrical wire. Black only. Minimum breaking strength 50#.



DESCRIPTION	PART #
500 YARD ROLL	WAX-TC

BUSS BAR

Replacement buss bar for the

electrical terminal board

Cadmium plated copper buss bars

maximum temperature is 330

degrees F. Requirements:

Minimum torque values: 6 stud – 11 lbs/in, 8 stud 32 lb/in, 10 stud 40 lb/in. The molded integral stud shall not break, distort or pull out of the terminal board before the minimum torque value is reached. Mounting hole sizes: 8-32 & 10-32 threads mount with #4 screw, 3/8 – 24 mounts with #6 screws.



THREAD SIZE	NUMBER OF HOLES	PART #
10-32	2	MS25226-4A-2
8-32	4	MS25226-10-4
3/8"-32	4	MS25226-8-4
8-32	8	MS25226-4-8
10-32	8	MS25226-4-8

ELECTRICAL STAINLESS FLAT WASHER

Replacement flat washer for the

electrical terminal board

For electrical applications. Type

304 stainless steel passivated.

QQ-S-766.



THREAD SIZE	PART #
8-32 FLAT	MS14151-6
10-32 FLAT	MS14151-2
3/8"-24 FLAT	MS14151-5

ELECTRICAL STAINLESS HEX NUT

Replacement hex nuts for the

electrical terminal

board. Stainless steel

passivated for electrical

applications.



THREAD SIZE	PART #
8-32 HEX NUT	MS35649-284
10-32 HEX NUT	MS35650-304
3/8"-24 HEX NUT	MS35650-3384

ELECTRICAL TERMINAL BOARD

Electrical terminal board

has molded in corrosion

resistant steel studs.

Maximum temperature for

terminal board is 445 degrees F. The terminal

board is capable of withstanding 2500 volt

RMS for 1 minute when applied between

adjacent studs and between stud and ground

without breakdown or flashover. Replacement

parts: Buss Bar, Hex Nut, Split Lock Washers,

and Flat Washer.



THREAD LENGTH WIDTH NUMBER PART SIZE OVERALL INCHES OF STUDS

8-32	3.45	3/4"	4	MS27212-6-4
3/8"-24	6.65	1-1/4"	4	MS27212-5-4
8-32	6.45	3/4"	8	MS27212-6-8
10-32	6.45	.938	8	MS27212-2-8
8-32	12.45	3/4"	16	MS27212-6-16

ELECTRICAL TERMINAL NIPPLE

White (Neoprene) right angle

nipples for housing

connections. MIL-R 5847,

Class II, Grade 50, rubber

silicone.



ANGLE O.D.	STRAIGHT OPENING	LENGTH	PART #
13/32"	5/32"	1-3/8"	MS25171-1S
9/16"	5/16"	2-1/2"	MS25171-2S
9/16"	7/16"	2-1/2"	MS25171-3S
9/16"	9/16"	2-1/2"	MS25171-3S

HOMEBUILDER'S TERMINAL KIT

Features 24 popular size

of ELECTRICAL

TERMINALS (insulated &

non-insulated ring, mini

spade, quick disconnects,

knife disconnects, and

window butt connectors).

Homebuilders kit includes: (stud size, wire

range) or (type, wire range)

20 each: **R1881S** (6, 22-18), **R1891S** (10, 22-16),

R1903S (10, 16-14)

10 each: **R2442S** (6, 16-14), **R5110** (1/4,

16-12), **R5112** (3/8, 12-10), **SS-22508** (8,

22-18), **SS-22541** (6, 16-14), **X5072985S**

(Male, 22-18), **X509024S** (Male, 16-14),

X509620S (Female, 22-18), **X509723S** (Female,

16-14), **R1906S** (1/4, 16-14) 5 each: **K5919S**

(22-16), **K5920S** (16-14),

K5921 (12-10), **B1841BN** (24-20),

B1870BN (22-18), **B1871BN** (16-14), **B1872BN**

(12-10) 4 each: **D8-14** (1/4, 7-9), **E6-14** (1/4,

6-5), **F4-516** (5/16, 4-3), **G2-516** (5/16, 2-1)



DESCRIPTION	PART #
HOMEBUILDER'S KIT	HET-TERMINAL KIT

ELECTRICAL EQUIPMENT

INSULATED KNIFE DISCONNECT

For splicing or connecting wires together. Wires are inserted from either end and butt against the built-in wire stop. Has see through nylon "window" for inspection. Connection is crimped in two places; one crimp for each wire. Constructed of one burr-free EIP copper for highest conductivities, annealed to insure maximum installed strength with electro tin plated for maximum corrosion resistance. Each terminal clearly stamped for positive identification, color coded for wire range. Open end construction allows visual inspection of wire locations.



WIRE RANGE	COLOR	PART #
22-16	RED	K5919S
16-14	BLUE	K5920S
12-10	YELLOW	K5921

INSULATED MINI SPRING SPADE

Small size for tight spaces, provides connection security of ring with insertion ease of spade by not having to remove nut from screw or stud post. Small projection inside tongue fork provides snap-on mechanism "locking" terminal in place like ring terminal. Extra force required to remove which will not fall off stud or screw. Constructed of one burr-free EIP copper for highest conductivity, annealed to insure maximum installed strength with electro tine plated for maximum corrosion resistance. Each terminal clearly stamped for positive identification, color coded for wire range. Open end construction allows visual inspection of wire locations.



TUBE O.D.	THREAD SIZE	COLOR	PART #
22-18	8	PINK/RED	SS-22508
16-14	6	BLUE	SS-22541

INSULATED QUICK DISCONNECT

Male & female slip on terminals which are not attached by use of a stud, instead tongue of female part slips on mating male part or tab. Provides quick and easy disconnection of wires. Slip on terminals have excellent holding force due to detents and rolled edges on tongue of female. Constructed of one burr-free EIP copper for highest conductivity, annealed to insure maximum installed strength with electro tin plated for maximum corrosion resistance. Each terminal clearly stamped for positive identification, color coded for wire range. Open end construction allows visual inspection of wire locations.



WIRE RANGE	TYPE	COLOR	PART #
22-18	FEMALE	PINK	XSO9620S
12-10	FEMALE	YELLOW	C572X
12-10	MALE	YELLOW	XSO72984N
22-18	MALE	RED	XSO72985S
16-14	MALE	BLUE	XSO9024S
16-14	FEMALE	BLUE	XSO9723S

INSULATED RING TYPE TERMINAL

An assembly of a bare terminal fitted with a funneled copper insulation gripping sleeve and a tightly fitting insulation sleeve made from PVC or nylon. Most secure type of tongue style, the attaching screw or stud must be inserted through hole in tongue; terminal cannot fall off if nut loosens.



WIRE RANGE	STUD SIZE	COLOR	PART #
22-18	6	PINK	R1881S
22-18	8	PINK	R1890S
22-18	10	PINK	R1891S
16-14	10	BLUE	R1903S
16-14	1/4"	BLUE	R1906S
16-14	8	BLUE	R2430S
16-14	6	BLUE	R2442S
12-10	1/4"	YELLOW	R5110
12-10	3/8"	YELLOW	R5112
8	5/16"	PINK	R3033BF
6	10	BLUE	R4001BF
6	8	BLUE	R4002BF
6	5/16"	BLUE	R4003BF
6	1/4"	BLUE	R4010BF
4	10	YELLOW	R5100BF
4	1/4"	YELLOW	R5101BF
4	5/16"	YELLOW	R5102BF
4	3/8"	YELLOW	R5103BF
4	N/A	YELLOW	R5104BF
2	1/4"	PINK	R8100BF
2	3/8"	PINK	R8103BF
2	1/2"	RED	R8104BF

INSULATED WINDOW BUTT CONNECTOR

For splicing or connecting wires together. Wires are inserted from either end and butt against the built-in wire stop. Has see through nylon "window" for inspection. Connection is crimped in two places; one crimp for each wire. Constructed of one burr-free EIP copper for highest conductivities, annealed to insure maximum installed strength with electro tin plated for maximum corrosion resistance. Each terminal clearly stamped for positive identification, color coded for wire range. Open end construction allows visual inspection of wire locations.



WIRE RANGE	COLOR	PART #
24-20	CLEAR	B1841BN
22-18	PINK	B1870BN
16-14	BLUE	B1871BN
12-10	YELLOW	B1872BN

NON INSULATED RING TYPE TERMINAL

Copper (tin plated) terminals, which, when crimped comprises a terminal with less resistance than an equal length of the conductor. Wire size also stamped on terminals. Non-insulated.



WIRE RANGE	STUD SIZE	PART #
7-9	1/4"	D8-14
6-5	1/4"	E6-14
6-5	5/16"	E6-516
4-3	1/4"	F4-14
4-3	5/16"	F4-516
2-1	1/4"	G2-14
2-1	3/8"	G2-38
2-1	5/16"	G2-516

ELECTRICAL EQUIPMENT

PROFESSIONAL TERMINAL KIT

Features 24 popular sizes of ELECTRICALS TERMINALS (insulated & non-insulated ring, mini spade, quick disconnects, knife disconnects, and window butt connectors).



Professional Terminal Kit includes: (stud size, wire range) or (type, wire range) 20 each: **R1881S** (6, 22-18), **R1891S** (10, 22-16), **R1903S** (10, 16-14), **K5919S** (22-16), **K5920S** (16-14), **B1841BN** (24-20), **B1870BN** (22-18) 10 each: **R1906S** (1/4, 16-14), **R2442S** (6, 16-14), **R5110** (1/4, 16-12), **R5112** (3/8, 12-10), **SS22508** (8, 22-18), **SS22541** (6, 16-14), **XSO9723S** (Female, 16-14), **XSO9024S** (Male, 16-14), **XSO9620S** (Female, 22-18), **XSO72985S** (Male, 22-18), **K5921** (12-10), **B1871BN** (16-14), **B1872BN** (12-10) 4 each: **D8-14** (1/4, 7-9), **E6-14** (1/4, 6-5), **F4-516** (5/16, 4-3), **G2-516** (5/16, 2-1)

DESCRIPTION	PART #
PROFESSIONAL KIT	ET-KIT-1

TERMINAL CRIMPER

Powerful full-ratcheting crimper with safety release and adjustable crimp pressure. Very comfortable rubber handles and ergonomic design makes it easy to install multiple terminals without fatigue. Uses interchangeable die jaws for different type of terminals.



DESCRIPTION	PART #
TERMINAL CRIMPER	E300-002

TERMINAL CRIMPER DIE SETS

Crimper dies for terminals, splices, BNC/TNC, and open barrel terminals.



DESCRIPTION	PART #
OPEN BARREL	E300-039
BNC	E300-038
R/Y/B	E300-058

COLORED UNSHIELDED ELECTRICAL WIRE

Unshielded electric wire in choice of 4 solid colors: black, red, yellow or blue. Stranded tin-plated copper wire with extruded ETFE Tefzel insulation. Max temp: 150C. Rated 600V. Meets MIL-W-22759/16.



GAUGE	O.D. WITH HOUSING	COLOR	PART #
22	.050	BLACK	BK7019
20	.060	BLACK	BK7020
18	.070	BLACK	BK7021
16	.078	BLACK	BK7022
22	.050	BLUE	BL7019
20	.060	BLUE	BL7020
18	.070	BLUE	BL7021
16	.078	BLUE	BL7022
22	.050	RED	RD7019
20	.060	RED	RD7020
18	.070	RED	RD7021
16	.078	RED	RD7022
22	.050	YELLOW	YE7019
20	.060	YELLOW	YE7020
18	.070	YELLOW	YE7021
16	.078	YELLOW	YE7022

SHIELDED ELECTRICAL WIRE

Shielded and jacketed aircraft wire conforms to MILC- 27500. Incorporates MIL-W- 22759/18 basic wire and features a Tefzel insulation, a shield of tin-plated copper braid and a jacket of Tefzel. It is temperature rated to 150° C and voltage rated at 600 volts.



GAUGE	O.D. WITH HOUSING	CONDUCTORS	PART #
22	.130	4	MS27500-22TG4
20	.143	3	M27500-20TG3T14
20	.086	1	7014
18	.100	1	7015
16	.102	1	7016
14	.130	1	7017
12	.143	1	7018
10	.180	1	7010

UNSHIELDED ELECTRICAL WIRE MIL-W-22759/16

Conductor: Stranded tin-plated copper. Insulation: Extruded ETFE Tefzel. Temperature Rating: 150° C. Voltage rating 600 volts.



GAUGE	O.D. WITH HOUSING	PART #
22	.050	7019
20	.060	7020
18	.070	7021
16	.078	7022
14	.093	7023
12	.115	7024
10	.140	7025
8	.195	7026
6	.250	7027
4	.305	7028
2	.387	7029

ACS IGNITION SWITCH

These fine quality switches are used in many aircraft. The switch housing is now machined from billet aluminum which makes this switch 25% lighter. They provide "ON" and "OFF" electrical control of both magnetos on single engine aircraft. The Key-operated switches mount from the rear of the panel in a 7/8" dia hole. Available with or without starter position. A510-2: Has starter position and comes with switch plate, two keys, and diode included. FAA PMA. A510-2K: Has starter position and comes with 2 aircraft locks (one door and one baggage), two keys mated to ignition switch and locks, and diode included. (PMA'd, except for door and baggage locks) A510-5: Does not have starter position, comes with switch plate and two keys; diode not required.



DESCRIPTION	KEYS	PART #
STARTER POSITION	IGNITION ONLY	A510-2
STARTER POSITION	IGNITION & DOORS	A510-2K
NO START POSITION	IGNITION ONLY	A510-5

ACS IGNITION SWITCH REPLACEMENT PARTS

Replacement parts and service kit for ACS ignition switches. Start position faceplate, blank keys, diode assembly, and service kit.



DESCRIPTION	PART #
DIODE ASSEMBLY	16050-2
SERVICE KIT	A-3650-2
BLANK KEYS SWITCH	A-3546-A
FACEPLATE-START	A-225-A

CESSNA SPLIT MASTER SWITCH & BRACKET

This versatile split red master switch has been used in virtually all single engine Cessna models since 1970 and can be used in most light aircraft with single alternator systems. Left rocker normally used for alternator and right half for battery. Order mount separately. Amp Rating is 20.



DESCRIPTION	PART #
MASTER SWITCH	S-1994-1-1
MOUNTING BRACKET	S-1843-1

ELECTRICAL EQUIPMENT

LEVER LOCK SWITCH

Single-pole, 2-position switch suitable for master switch. Features locking toggle actuator for safety. 20,000 cycle life expectancy over temp range of -85F to +160F. Rated 5 amp lamp load, 20 amp resistive load, and 15 amp inductive load @ 28VDC. Flush screw terminals. Requires 15/32" mounting hole. Meets MIL-S-3950.



DESCRIPTION	PART #
SINGLE POLE	MS24658-22D

MICRO SWITCH

Up to 15 amps load handling, performs under shock and vibration. Solder terminal.



DESCRIPTION	PART #
SPDT	V7-6C17D8

MICRO TOGGLE SWITCH

Toggle lever socket is sealed to prevent entrance of liquids or dust from entering switch case. Has bright nickel plated lever. Dimensions: .650 wide, 1.250 long, 1.073 deep.



DESCRIPTION	ACTION	PART #
SPST	ON-OFF	11TS15-2

MINIATURE TOGGLE SWITCH

Switch is constructed of high strength plastic which is compartmented to assure isolation of circuits. Contacts are made of silver or brass silver plated. Rated 1.5 amps at 12 VAC 012 with solder connection. Mounting hardware included. Dimensions: SP - 1/4 x 1/2 x 5/16 deep; DP - 7/16 x 1/2 x 5/16 deep. Neck: 1/4" dia. x 5/16" long. *Momentary



DESCRIPTION	ACTION	PART #
SPDT	ON-NONE-ON	7101
SPDT	ON-OFF-ON*	7107
DPDT	ON-NONE-ON	7201
DPDT	ON-OFF-ON	7203
DPDT	ON*-OFF-ON*	7205
DPDT	ON-OFF-ON*	7207

MS35058 SERIES TOGGLE SWITCH

MS35058 Series toggle switches are recommended when maximum reliability is required. All contain a silicone rubber bushing seal. 20 amp rating at 125 VAC. Switches have 6-32 screw terminal. Mounting hardware included, neck mount. Behind panel dimension: 5/8" x 1-1/8" x 1-1/16" deep. Neck: 7/16" diameter x 1/2" long. *Momentary



DESCRIPTION	ACTION	PART #
SPDT 3 TERMINAL	ON-OFF-ON	MS35058-21
SPST 2 TERMINAL	ON-NONE-OFF	MS35058-22
SPDT 3 TERMINAL	ON-NONE-OFF	MS35058-23
SPDT 3 TERMINAL	ON*-OFF-ON*	MS35058-27
SPDT 2 TERMINAL	OFF-ON*	MS35058-30

MS35059 SERIES TOGGLE SWITCH

MS35059 Series toggle switches same as MS35058 series, however, behind panel dimensions: 3/4" x 1-21/64" x 1-13/64" deep. Neck 7/16" diameter x 1/2" long. *Momentary



DESCRIPTION	ACTION	PART #
DPDT 6 TERMINAL	ON-OFF-ON	MS35059-21
DPST 4 TERMINAL	ON-NONE-OFF	MS35059-22
DPDT 6 TERMINAL	ON-NONE-OFF	MS35059-23
DPDT 6 TERMINAL	ON*-OFF-ON*	MS35059-27

PUSH TO TALK SWITCH

16mm Momentary Push Button Switch. Waterproof Aluminum Shell. High Flush Screw Terminals. 250V AC 5A 12V 36V DC 2A 1NO SPST (Black).



DESCRIPTION	PART #
PTT SWITCH	A16PTT

SINGLE HOLE SWITCH GUARD

Red in color, this guard will prevent inadvertent operation of switch, thus switch will work only when springloaded guard is lifted up. When the guard is returned to the down position, it forces the switch lever to the off position. For use with MS35058 or MS35059 type switch, single hole.



DESCRIPTION	PART #
SWITCH GUARD	MS25224-1

SUB MINIATURE MOMENTARY SWITCH - PUSH BUTTON

Butt contact pushbutton switches. Panel mount. Rated 1/2 amp @ 115 vac and 1/4 amp @ 220 vac. Diameter - .25", behind panel - .135". SPST N.O. solder terminals.



DESCRIPTION	PART #
PUSH BUTTON	SW-391

AIRCRAFT FUSE HOLDER

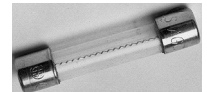
This black phenolic holder is non-indicating. Spring provides contact pressure on ends, knob grips fuse and pulls it from holder when knob is removed. 1/2" mounting hole, with nut from behind. Can be used with [Aircraft Fuses](#).



DESCRIPTION	PART #
15 AMP 250 V	381

AIRCRAFT FUSES

Fast acting to protect sensitive instruments and radios, these AGC type are glass enclosed with a single fuse element. Can use with [Fuse Holder](#).



DESCRIPTION	PART #
1/4 AMP	AGC-1/4-R
1 AMP	AGC-1
2 AMP	AGC-2
5 AMP	AGC-5
10 AMP	AGC-10
15 AMP	AGC-15
20 AMP	AGC-20
25 AMP	AGC-25
30 AMP	AGC-30
35 AMP	AGC-35

KLIXON CIRCUIT BREAKER

Manual reset circuit breakers used extensively as an alternative to slow-blow fuses in aircraft primary electrical circuitry. Single phase, non temperature compensated design features light weight, miniature size, and high vibration resistance. At 32F-Min ultimate trip: 110%; Max ultimate trip: 150%. Maximum width 3/4". Length behind panel is 1-3/8". Screw end terminals.



AMP RATING	MAXIMUM VOLTAGE DROP	PART #
1 AMP	1.10	7277-2-1
2 AMP	0.70	7277-2-2
3 AMP	0.33	7277-2-3
5 AMP	0.25	7277-2-5
7.5 AMP	0.20	7277-2-7.5
10 AMP	0.15	7277-2-10
15 AMP	0.15	7277-2-15
20 AMP	0.15	7277-2-20

FASTENERS & HARDWARE

BOLT AN3 - 3/16" (1032) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 10-32. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



BOLT AN3 - 3/16" (1032) - UNDRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 10-32. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
15/32"	1/16"	CAD PLATED	DRILLED SHANK	AN3-3
17/32"	1/8"	CAD PLATED	DRILLED SHANK	AN3-4
21/32"	1/4"	CAD PLATED	DRILLED SHANK	AN3-5
25/32"	3/8"	CAD PLATED	DRILLED SHANK	AN3-6
29/32"	1/2"	CAD PLATED	DRILLED SHANK	AN3-7
1-1/32"	5/8"	CAD PLATED	DRILLED SHANK	AN3-10
1-5/32"	3/4"	CAD PLATED	DRILLED SHANK	AN3-11
1-7/32"	7/8"	CAD PLATED	DRILLED SHANK	AN3-12
1-13/32"	1"	CAD PLATED	DRILLED SHANK	AN3-13
1-17/32"	1-1/8"	CAD PLATED	DRILLED SHANK	AN3-14
1-21/32"	1-1/4"	CAD PLATED	DRILLED SHANK	AN3-15
1-25/32"	1-3/8"	CAD PLATED	DRILLED SHANK	AN3-16
1-29/32"	1-1/2"	CAD PLATED	DRILLED SHANK	AN3-17
2-1/32"	1-5/8"	CAD PLATED	DRILLED SHANK	AN3-20
2-5/32"	1-3/4"	CAD PLATED	DRILLED SHANK	AN3-21
2-9/32"	1-7/8"	CAD PLATED	DRILLED SHANK	AN3-22
2-13/32"	2"	CAD PLATED	DRILLED SHANK	AN3-23
2-17/32"	2-1/8"	CAD PLATED	DRILLED SHANK	AN3-24
2-21/32"	2-1/4"	CAD PLATED	DRILLED SHANK	AN3-25
2-25/32"	2-3/8"	CAD PLATED	DRILLED SHANK	AN3-26
2-29/32"	2-1/2"	CAD PLATED	DRILLED SHANK	AN3-27
3-1/32"	2-5/8"	CAD PLATED	DRILLED SHANK	AN3-30
3-5/32"	2-3/4"	CAD PLATED	DRILLED SHANK	AN3-31
3-9/32"	2-7/8"	CAD PLATED	DRILLED SHANK	AN3-32
3-13/32"	3"	CAD PLATED	DRILLED SHANK	AN3-33
3-17/32"	3-1/8"	CAD PLATED	DRILLED SHANK	AN3-34
3-21/32"	3-1/4"	CAD PLATED	DRILLED SHANK	AN3-35
3-25/32"	3-3/8"	CAD PLATED	DRILLED SHANK	AN3-36
3-29/32"	3-1/2"	CAD PLATED	DRILLED SHANK	AN3-37
4-1/32"	3-5/8"	CAD PLATED	DRILLED SHANK	AN3-40
4-5/32"	3-3/4"	CAD PLATED	DRILLED SHANK	AN3-41
4-17/32"	4-1/8"	CAD PLATED	DRILLED SHANK	AN3-44
4-25/32"	4-3/8"	CAD PLATED	DRILLED SHANK	AN3-46
4-29/32"	4-1/2"	CAD PLATED	DRILLED SHANK	AN3-47
5-1/32"	4-5/8"	CAD PLATED	DRILLED SHANK	AN3-50
6-1/32"	5-5/8"	CAD PLATED	DRILLED SHANK	AN3-60
1/2"	1/8"	431 STAINLESS	DRILLED SHANK	AN3C-4
5/8"	1/4"	431 STAINLESS	DRILLED SHANK	AN3C-5
3/4"	5/8"	431 STAINLESS	DRILLED SHANK	AN3C-6
7/8"	1/2"	431 STAINLESS	DRILLED SHANK	AN3C-7
1"	5/8"	431 STAINLESS	DRILLED SHANK	AN3C-10
1-1/8"	3/4"	431 STAINLESS	DRILLED SHANK	AN3C-11
1-1/4"	7/8"	431 STAINLESS	DRILLED SHANK	AN3C-12
1-3/8"	1"	431 STAINLESS	DRILLED SHANK	AN3C-13
1-1/2"	1-1/2"	431 STAINLESS	DRILLED SHANK	AN3C-14
1-5/8"	1-1/4"	431 STAINLESS	DRILLED SHANK	AN3C-15

LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
15/32"	1/16"	CAD PLATED	UNDRILLED SHANK	AN3-3A
17/32"	1/8"	CAD PLATED	UNDRILLED SHANK	AN3-4A
21/32"	1/4"	CAD PLATED	UNDRILLED SHANK	AN3-5A
25/32"	3/8"	CAD PLATED	UNDRILLED SHANK	AN3-6A
29/32"	1/2"	CAD PLATED	UNDRILLED SHANK	AN3-7A
1-1/32"	5/8"	CAD PLATED	UNDRILLED SHANK	AN3-10A
1-5/32"	3/4"	CAD PLATED	UNDRILLED SHANK	AN3-11A
1-7/32"	7/8"	CAD PLATED	UNDRILLED SHANK	AN3-12A
1-13/32"	1"	CAD PLATED	UNDRILLED SHANK	AN3-13A
1-17/32"	1-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-14A
1-21/32"	1-1/4"	CAD PLATED	UNDRILLED SHANK	AN3-15A
1-25/32"	1-3/8"	CAD PLATED	UNDRILLED SHANK	AN3-16A
1-29/32"	1-1/2"	CAD PLATED	UNDRILLED SHANK	AN3-17A
2-1/32"	1-5/8"	CAD PLATED	UNDRILLED SHANK	AN3-20A
2-5/32"	1-3/4"	CAD PLATED	UNDRILLED SHANK	AN3-21A
2-9/32"	1-7/8"	CAD PLATED	UNDRILLED SHANK	AN3-22A
2-13/32"	2"	CAD PLATED	UNDRILLED SHANK	AN3-23A
2-17/32"	2-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-24A
2-21/32"	2-1/4"	CAD PLATED	UNDRILLED SHANK	AN3-25A
2-25/32"	2-3/8"	CAD PLATED	UNDRILLED SHANK	AN3-26A
2-29/32"	2-1/2"	CAD PLATED	UNDRILLED SHANK	AN3-27A
3-1/32"	2-5/8"	CAD PLATED	UNDRILLED SHANK	AN3-30A
3-5/32"	2-3/4"	CAD PLATED	UNDRILLED SHANK	AN3-31A
3-9/32"	2-7/8"	CAD PLATED	UNDRILLED SHANK	AN3-32A
3-13/32"	3"	CAD PLATED	UNDRILLED SHANK	AN3-33A
3-17/32"	3-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-34A
3-21/32"	3-1/4"	CAD PLATED	UNDRILLED SHANK	AN3-35A
3-25/32"	3-3/8"	CAD PLATED	UNDRILLED SHANK	AN3-36A
3-29/32"	3-1/2"	CAD PLATED	UNDRILLED SHANK	AN3-37A
4-1/32"	3-5/8"	CAD PLATED	UNDRILLED SHANK	AN3-40A
4-5/32"	3-3/4"	CAD PLATED	UNDRILLED SHANK	AN3-41A
4-9/32"	3-7/8"	CAD PLATED	UNDRILLED SHANK	AN3-42A
4-13/32"	4"	CAD PLATED	UNDRILLED SHANK	AN3-43A
4-17/32"	4-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-44A
4-21/32"	4-1/4"	CAD PLATED	UNDRILLED SHANK	AN3-45A
4-25/32"	4-3/8"	CAD PLATED	UNDRILLED SHANK	AN3-46A
4-29/32"	4-1/2"	CAD PLATED	UNDRILLED SHANK	AN3-47A
5-5/32"	4-3/4"	CAD PLATED	UNDRILLED SHANK	AN3-51A
5-9/32"	4-7/8"	CAD PLATED	UNDRILLED SHANK	AN3-52A
5-17/32"	5-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-54A
5-21/32"	5-1/4"	CAD PLATED	UNDRILLED SHANK	AN3-55A
6-1/32"	5-5/8"	CAD PLATED	UNDRILLED SHANK	AN3-60A
6-13/32"	6"	CAD PLATED	UNDRILLED SHANK	AN3-63A
6-17/32"	6-1/8"	CAD PLATED	UNDRILLED SHANK	AN3-64A
3/8"	1/16"	431 STAINLESS	UNDRILLED SHANK	AN3C-3A
1/2"	1/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-4A
5/8"	1/4"	431 STAINLESS	UNDRILLED SHANK	AN3C-5A
3/4"	3/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-6A
7/8"	1/2"	431 STAINLESS	UNDRILLED SHANK	AN3C-7A
1"	5/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-10A
1-1/8"	3/4"	431 STAINLESS	UNDRILLED SHANK	AN3C-11A
1-1/4"	7/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-12A
1-3/8"	1"	431 STAINLESS	UNDRILLED SHANK	AN3C-13A
1-1/2"	1-1/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-14A
1-1/4"	1-5/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-15A
1-3/4"	1-3/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-16A
1-7/8"	1-1/2"	431 STAINLESS	UNDRILLED SHANK	AN3C-17A
2"	1-5/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-20A
2-1/8"	1-3/4"	431 STAINLESS	UNDRILLED SHANK	AN3C-21A
2-1/4"	1-7/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-22A
2-3/8"	2"	431 STAINLESS	UNDRILLED SHANK	AN3C-23A
2-1/2"	2-1/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-24A
2-5/8"	2-1/4"	431 STAINLESS	UNDRILLED SHANK	AN3C-25A
2-3/4"	2-3/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-26A
2-7/8"	2-1/2"	431 STAINLESS	UNDRILLED SHANK	AN3C-27A
3"	2-5/8"	431 STAINLESS	UNDRILLED SHANK	AN3C-30A

AN3 & AN4 BOLT KIT

AN3 & 4 drilled and not drilled bolts in plastic container which keeps all bolts separate (LPB-1). Kit includes 10 each: AN3 – 4,5,6,7,10,12, 13, 14 undrilled 10 each: AN3 – 6,7,10,12 drilled 10 each: AN4 – 5,6,7,10,12, 13,14 undrilled 10 each: AN4- 6,7,10,12 drilled.



DESCRIPTION	PART #
BOLT KIT	BP100

FASTENERS & HARDWARE

BOLT AN3 - 3/16" (1032) - DRILLED HEAD

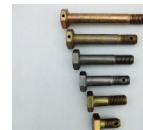
Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 10-32. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
17/32"	1/8"	CAD PLATED	DRILLED HEAD & SHANK	AN3H-4
25/32"	3/8"	CAD PLATED	DRILLED HEAD & SHANK	AN3H-6
1-21/32"	1-1/4"	CAD PLATED	DRILLED HEAD & SHANK	AN3H-15
2-21/32"	2-1/4"	CAD PLATED	DRILLED HEAD & SHANK	AN3H-25
15/23"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN3H-3A
17/32"	1/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-4A
21/32"	1/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-5A
25/32"	3/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-6A
29/32"	1/2"	CAD PLATED	DRILLED HEAD ONLY	AN3H-7A
1-1/32"	5/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-10A
1-5/32"	3/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-11A
1-7/32"	7/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-12A
1-13/32"	1"	CAD PLATED	DRILLED HEAD ONLY	AN3H-13A
1-17/32"	1-1/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-14A
1-21/32"	1-1/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-15A
1-25/32"	1-3/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-16A
1-29/32"	1-1/2"	CAD PLATED	DRILLED HEAD ONLY	AN3H-17A
2-1/32"	1-5/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-20A
2-9/32"	1-7/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-22A
2-13/32"	2"	CAD PLATED	DRILLED HEAD ONLY	AN3H-23A
2-17/32"	2-1/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-24A
2-21/32"	2-1/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-25A
2-25/32"	2-3/8"	CAD PLATED	DRILLED HEAD ONLY	AN3H-26A
3-21/32"	3-1/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-35A
4-21/32"	4-1/4"	CAD PLATED	DRILLED HEAD ONLY	AN3H-45A

BOLT AN4 - 1/4" (28) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/4-28. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
15/32"	1/16"	CAD PLATED	DRILLED SHANK	AN4-3
17/32"	1/16"	CAD PLATED	DRILLED SHANK	AN4-4
21/32"	3/16"	CAD PLATED	DRILLED SHANK	AN4-5
25/32"	5/16"	CAD PLATED	DRILLED SHANK	AN4-6
29/32"	7/16"	CAD PLATED	DRILLED SHANK	AN4-7
1-1/32"	9/16"	CAD PLATED	DRILLED SHANK	AN4-10
1-5/32"	11/16"	CAD PLATED	DRILLED SHANK	AN4-11
1-9/32"	13/16"	CAD PLATED	DRILLED SHANK	AN4-12
1-13/32"	15/16"	CAD PLATED	DRILLED SHANK	AN4-13
1-17/32"	1-1/16"	CAD PLATED	DRILLED SHANK	AN4-14
1-21/32"	1-3/16"	CAD PLATED	DRILLED SHANK	AN4-15
1-25/32"	1-5/16"	CAD PLATED	DRILLED SHANK	AN4-16
1-29/32"	1-7/16"	CAD PLATED	DRILLED SHANK	AN4-17
2-1/32"	1-9/16"	CAD PLATED	DRILLED SHANK	AN4-20
2-5/32"	1-11/16"	CAD PLATED	DRILLED SHANK	AN4-21
2-9/32"	1-13/16"	CAD PLATED	DRILLED SHANK	AN4-22
2-13/32"	1-15/16"	CAD PLATED	DRILLED SHANK	AN4-23
2-17/32"	2-1/16"	CAD PLATED	DRILLED SHANK	AN4-24
2-21/32"	2-3/16"	CAD PLATED	DRILLED SHANK	AN4-25
2-25/32"	2-5/16"	CAD PLATED	DRILLED SHANK	AN4-26
2-29/32"	2-7/16"	CAD PLATED	DRILLED SHANK	AN4-27
3-1/32"	2-9/16"	CAD PLATED	DRILLED SHANK	AN4-30
3-5/32"	2-11/16"	CAD PLATED	DRILLED SHANK	AN4-31
3-9/32"	2-13/16"	CAD PLATED	DRILLED SHANK	AN4-32
3-13/32"	2-15/16"	CAD PLATED	DRILLED SHANK	AN4-33
3-17/32"	3-1/16"	CAD PLATED	DRILLED SHANK	AN4-34
3-21/32"	3-3/16"	CAD PLATED	DRILLED SHANK	AN4-35
3-25/32"	3-5/16"	CAD PLATED	DRILLED SHANK	AN4-36
3-29/32"	3-7/16"	CAD PLATED	DRILLED SHANK	AN4-37
4-1/32"	3-9/16"	CAD PLATED	DRILLED SHANK	AN4-40
4-5/32"	3-11/16"	CAD PLATED	DRILLED SHANK	AN4-41
4-17/32"	4-1/16"	CAD PLATED	DRILLED SHANK	AN4-44
4-25/32"	4-5/16"	CAD PLATED	DRILLED SHANK	AN4-46
4-29/32"	4-7/16"	CAD PLATED	DRILLED SHANK	AN4-47
5-1/32"	4-9/16"	CAD PLATED	DRILLED SHANK	AN4-50
5-5/32"	4-11/16"	CAD PLATED	DRILLED SHANK	AN4-51
5-9/32"	4-13/16"	CAD PLATED	DRILLED SHANK	AN4-52
5-13/32"	4-15/16"	CAD PLATED	DRILLED SHANK	AN4-53
5-25/32"	5-5/16"	CAD PLATED	DRILLED SHANK	AN4-56
5-29/32"	5-7/16"	CAD PLATED	DRILLED SHANK	AN4-57
6-1/32"	5-9/16"	CAD PLATED	DRILLED SHANK	AN4-60
6-17/32"	6-1/16"	CAD PLATED	DRILLED SHANK	AN4-64
5/8"	3/16"	431 STAINLESS	DRILLED SHANK	AN4C-5
3/4"	5/16"	431 STAINLESS	DRILLED SHANK	AN4C-6
7/8"	7/16"	431 STAINLESS	DRILLED SHANK	AN4C-7
1"	9/16"	431 STAINLESS	DRILLED SHANK	AN4C-10
1-1/8"	11/16"	431 STAINLESS	DRILLED SHANK	AN3C-11
1-1/4"	13/16"	431 STAINLESS	DRILLED SHANK	AN4C-12
1-3/8"	15/16"	431 STAINLESS	DRILLED SHANK	AN4C-13
1-1/2"	1-1/16"	431 STAINLESS	DRILLED SHANK	AN4C-14
1-5/8"	1-3/16"	431 STAINLESS	DRILLED SHANK	AN4C-15
1-3/4"	1-5/16"	431 STAINLESS	DRILLED SHANK	AN4C-16

BOLT AN4 - 1/4" (28) - DRILLED HEAD

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/4-28. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
21/32"	3/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-5
25/32"	5/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-6
1-1/32"	9/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-10
1-9/32"	13/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-12
1-17/32"	1-1/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-14
1-21/32"	1-3/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-15
4-9/32"	3-13/16"	CAD PLATED	DRILLED HEAD & SHANK	AN4H-42
15/32"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-3A
17/32"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-4A
21/32"	3/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-5A
25/32"	5/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-6A
29/32"	7/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-7A
1-1/32"	9/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-10A
1-5/32"	11/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-11A
1-9/32"	13/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-12A
1-13/32"	15/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-13A
1-17/32"	1-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-14A
1-21/32"	1-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-15A
1-25/32"	1-5/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-16A
1-29/32"	1-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-17A
2-1/32"	1-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-20A
2-5/32"	1-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-21A
2-9/32"	1-13/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-22A
2-13/32"	1-15/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-23A
2-17/32"	2-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-24A
2-21/32"	2-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-25A
2-25/32"	2-5/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-26A
2-29/32"	2-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-27A
3-1/32"	2-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-30A
3-5/32"	2-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-31A
3-9/32"	2-13/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-32A
3-13/32"	2-15/16"	CAD PLATED	DRILLED HEAD ONLY	AN4H-33A

FASTENERS & HARDWARE

BOLT AN4 - 1/4" (28) - UNDRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/4-28. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



BOLT AN5 - 5/16" (24) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 5/16-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
15/32"	1/16"	CAD PLATED	UNDRILLED SHANK	AN4-3A
17/32"	1/16"	CAD PLATED	UNDRILLED SHANK	AN4-4A
21/32"	3/16"	CAD PLATED	UNDRILLED SHANK	AN4-5A
25/32"	5/16"	CAD PLATED	UNDRILLED SHANK	AN4-6A
29/32"	7/16"	CAD PLATED	UNDRILLED SHANK	AN4-7A
1-1/32"	9/16"	CAD PLATED	UNDRILLED SHANK	AN4-10A
1-5/32"	11/16"	CAD PLATED	UNDRILLED SHANK	AN4-11A
1-9/32"	13/16"	CAD PLATED	UNDRILLED SHANK	AN4-12A
1-13/32"	15/16"	CAD PLATED	UNDRILLED SHANK	AN4-13A
1-17/32"	1-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-14A
1-21/32"	1-3/16"	CAD PLATED	UNDRILLED SHANK	AN4-15A
1-25/32"	1-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-16A
1-29/32"	1-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-17A
2-1/32"	1-9/16"	CAD PLATED	UNDRILLED SHANK	AN4-20A
2-5/32"	1-11/16"	CAD PLATED	UNDRILLED SHANK	AN4-21A
2-9/32"	1-13/16"	CAD PLATED	UNDRILLED SHANK	AN4-22A
2-13/32"	1-15/16"	CAD PLATED	UNDRILLED SHANK	AN4-23A
2-17/32"	2-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-24A
2-21/32"	2-3/16"	CAD PLATED	UNDRILLED SHANK	AN4-25A
2-25/32"	2-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-26A
2-29/32"	2-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-27A
3-1/32"	2-9/16"	CAD PLATED	UNDRILLED SHANK	AN4-30A
3-5/32"	2-11/16"	CAD PLATED	UNDRILLED SHANK	AN4-31A
3-9/32"	2-13/16"	CAD PLATED	UNDRILLED SHANK	AN4-32A
3-13/32"	2-15/16"	CAD PLATED	UNDRILLED SHANK	AN4-33A
3-17/32"	3-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-34A
3-21/32"	3-3/16"	CAD PLATED	UNDRILLED SHANK	AN4-35A
3-25/32"	3-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-36A
3-29/32"	3-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-37A
4-1/32"	3-9/16"	CAD PLATED	UNDRILLED SHANK	AN4-40A
4-5/32"	3-11/16"	CAD PLATED	UNDRILLED SHANK	AN4-41A
4-9/32"	3-13/16"	CAD PLATED	UNDRILLED SHANK	AN4-42A
4-13/32"	3-15/16"	CAD PLATED	UNDRILLED SHANK	AN4-43A
4-17/32"	4-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-44A
4-25/32"	4-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-46A
4-29/32"	4-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-47A
5-1/32"	4-9/16"	CAD PLATED	UNDRILLED SHANK	AN4-50A
5-5/32"	4-11/16"	CAD PLATED	UNDRILLED SHANK	AN4-51A
5-9/32"	4-13/16"	CAD PLATED	UNDRILLED SHANK	AN4-52A
5-13/32"	4-15/16"	CAD PLATED	UNDRILLED SHANK	AN4-53A
5-17/32"	5-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-54A
5-21/32"	5-3/16"	CAD PLATED	UNDRILLED SHANK	AN4-55A
5-25/32"	5-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-56A
5-29/32"	5-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-57A
6-1/32"	5-9/16"	CAD PLATED	UNDRILLED SHANK	AN4-60A
6-5/32"	5-11/16"	CAD PLATED	UNDRILLED SHANK	AN4-61A
6-13/32"	5-15/16"	CAD PLATED	UNDRILLED SHANK	AN4-63A
6-17/32"	6-1/16"	CAD PLATED	UNDRILLED SHANK	AN4-64A
6-25/32"	6-5/16"	CAD PLATED	UNDRILLED SHANK	AN4-66A
6-29/32"	6-7/16"	CAD PLATED	UNDRILLED SHANK	AN4-67A
7-21/32"	7-3/16"	CAD PLATED	UNDRILLED SHANK	AN4-75A
3/8"	1/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-3A
1/2"	1/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-4A
5/8"	3/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-5A
3/4"	5/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-6A
7/8"	7/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-7A
1"	9/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-10A
1-1/8"	11/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-11A
1-1/4"	13/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-12A
1-3/8"	15/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-13A
1-1/2"	1-1/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-14A
1-5/8"	1-3/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-15A
1-3/4"	1-5/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-16A
1-7/8"	1-7/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-17A
2"	1-9/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-20A
2-1/8"	1-11/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-21A
2-1/4"	1-13/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-22A
2-3/8"	1-15/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-23A
2-1/2"	2-1/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-24A
2-5/8"	2-3/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-25A
2-3/4"	2-5/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-26A
2-29/32"	2-7/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-27A
3"	2-9/16"	431 STAINLESS	UNDRILLED SHANK	AN4C-30A

LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
19/32"	1/16"	CAD PLATED	DRILLED SHANK	AN5-4
23/32"	3/16"	CAD PLATED	DRILLED SHANK	AN5-5
27/32"	5/16"	CAD PLATED	DRILLED SHANK	AN5-6
31/32"	7/16"	CAD PLATED	DRILLED SHANK	AN5-7
1-3/32"	9/16"	CAD PLATED	DRILLED SHANK	AN5-10
1-7/32"	11/16"	CAD PLATED	DRILLED SHANK	AN5-11
1-11/32"	13/16"	CAD PLATED	DRILLED SHANK	AN5-12
1-15/32"	15/16"	CAD PLATED	DRILLED SHANK	AN5-13
1-19/32"	1-1/16"	CAD PLATED	DRILLED SHANK	AN5-14
1-23/32"	1-3/16"	CAD PLATED	DRILLED SHANK	AN5-15
1-27/32"	1-5/16"	CAD PLATED	DRILLED SHANK	AN5-16
1-31/32"	1-7/16"	CAD PLATED	DRILLED SHANK	AN5-17
2-3/32"	1-9/16"	CAD PLATED	DRILLED SHANK	AN5-20
2-7/32"	1-11/16"	CAD PLATED	DRILLED SHANK	AN5-21
2-11/32"	1-13/16"	CAD PLATED	DRILLED SHANK	AN5-22
2-15/32"	1-15/16"	CAD PLATED	DRILLED SHANK	AN5-23
2-19/32"	2-1/16"	CAD PLATED	DRILLED SHANK	AN5-24
2-23/32"	2-3/16"	CAD PLATED	DRILLED SHANK	AN5-25
2-27/32"	2-5/16"	CAD PLATED	DRILLED SHANK	AN5-26
2-31/32"	2-7/16"	CAD PLATED	DRILLED SHANK	AN5-27
3-3/32"	2-9/16"	CAD PLATED	DRILLED SHANK	AN5-30
3-7/32"	2-11/16"	CAD PLATED	DRILLED SHANK	AN5-31
3-11/32"	2-13/16"	CAD PLATED	DRILLED SHANK	AN5-32
3-15/32"	2-15/16"	CAD PLATED	DRILLED SHANK	AN5-33
3-19/32"	3-1/16"	CAD PLATED	DRILLED SHANK	AN5-34
3-23/32"	3-3/16"	CAD PLATED	DRILLED SHANK	AN5-35
3-27/32"	3-5/16"	CAD PLATED	DRILLED SHANK	AN5-36
3-31/32"	3-7/16"	CAD PLATED	DRILLED SHANK	AN5-37
4-3/32"	3-9/16"	CAD PLATED	DRILLED SHANK	AN5-40
4-7/32"	3-11/16"	CAD PLATED	DRILLED SHANK	AN5-41
4-11/32"	3-13/16"	CAD PLATED	DRILLED SHANK	AN5-42
4-15/32"	3-15/16"	CAD PLATED	DRILLED SHANK	AN5-43
4-19/32"	4-1/16"	CAD PLATED	DRILLED SHANK	AN5-44
4-23/32"	4-3/16"	CAD PLATED	DRILLED SHANK	AN5-45
4-27/32"	4-5/16"	CAD PLATED	DRILLED SHANK	AN5-46
4-31/32"	4-7/16"	CAD PLATED	DRILLED SHANK	AN5-47
5-3/32"	4-9/16"	CAD PLATED	DRILLED SHANK	AN5-50
5-11/32"	4-13/16"	CAD PLATED	DRILLED SHANK	AN5-52
5-15/32"	4-15/16"	CAD PLATED	DRILLED SHANK	AN5-53
5-19/32"	5-1/16"	CAD PLATED	DRILLED SHANK	AN5-54
5-23/32"	5-3/16"	CAD PLATED	DRILLED SHANK	AN5-55
5-27/32"	5-5/16"	CAD PLATED	DRILLED SHANK	AN5-56
6-3/32"	5-9/16"	CAD PLATED	DRILLED SHANK	AN5-60
6-15/32"	5-15/16"	CAD PLATED	DRILLED SHANK	AN5-63

FASTENERS & HARDWARE

BOLT AN5 - 5/16" (24) - UNDRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 5/16-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



BOLT AN5 - 5/16" (24) - DRILLED HEAD

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 5/16-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
19/32"	1/16"	CAD PLATED	UNDRILLED SHANK	AN5-4A
23/32"	3/16"	CAD PLATED	UNDRILLED SHANK	AN5-5A
27/32"	5/16"	CAD PLATED	UNDRILLED SHANK	AN5-6A
31/32"	7/16"	CAD PLATED	UNDRILLED SHANK	AN5-7A
1-3/32"	9/16"	CAD PLATED	UNDRILLED SHANK	AN5-10A
1-7/32"	11/16"	CAD PLATED	UNDRILLED SHANK	AN5-11A
1-11/32"	13/16"	CAD PLATED	UNDRILLED SHANK	AN5-12A
1-15/32"	15/16"	CAD PLATED	UNDRILLED SHANK	AN5-13A
1-19/32"	1-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-14A
1-23/32"	1-3/16"	CAD PLATED	UNDRILLED SHANK	AN5-15A
1-27/32"	1-5/16"	CAD PLATED	UNDRILLED SHANK	AN5-16A
1-31/32"	1-7/16"	CAD PLATED	UNDRILLED SHANK	AN5-17A
2-3/32"	1-9/16"	CAD PLATED	UNDRILLED SHANK	AN5-20A
2-7/32"	1-11/16"	CAD PLATED	UNDRILLED SHANK	AN5-21A
2-11/32"	1-13/16"	CAD PLATED	UNDRILLED SHANK	AN5-22A
2-15/32"	1-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-23A
2-19/32"	2-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-24A
2-23/32"	2-3/16"	CAD PLATED	UNDRILLED SHANK	AN5-25A
2-27/32"	2-5/16"	CAD PLATED	UNDRILLED SHANK	AN5-26A
2-31/32"	2-7/16"	CAD PLATED	UNDRILLED SHANK	AN5-27A
3-3/32"	2-9/16"	CAD PLATED	UNDRILLED SHANK	AN5-30A
3-7/32"	2-11/16"	CAD PLATED	UNDRILLED SHANK	AN5-31A
3-11/32"	2-13/16"	CAD PLATED	UNDRILLED SHANK	AN5-32A
3-15/32"	2-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-33A
3-19/32"	3-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-34A
3-23/32"	3-3/16"	CAD PLATED	UNDRILLED SHANK	AN5-35A
3-27/32"	3-5/16"	CAD PLATED	UNDRILLED SHANK	AN5-36A
3-31/32"	3-7/16"	CAD PLATED	UNDRILLED SHANK	AN5-37A
4-3/32"	3-9/16"	CAD PLATED	UNDRILLED SHANK	AN5-40A
4-7/32"	3-11/16"	CAD PLATED	UNDRILLED SHANK	AN5-41A
4-11/32"	3-13/16"	CAD PLATED	UNDRILLED SHANK	AN5-42A
4-15/32"	3-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-43A
4-19/32"	4-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-44A
4-23/32"	4-3/16"	CAD PLATED	UNDRILLED SHANK	AN5-45A
4-27/32"	4-5/16"	CAD PLATED	UNDRILLED SHANK	AN5-46A
4-31/32"	4-7/16"	CAD PLATED	UNDRILLED SHANK	AN5-47A
5-3/32"	4-9/16"	CAD PLATED	UNDRILLED SHANK	AN5-50A
5-7/32"	4-11/16"	CAD PLATED	UNDRILLED SHANK	AN5-51A
5-11/32"	4-13/16"	CAD PLATED	UNDRILLED SHANK	AN5-52A
5-15/32"	4-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-53A
5-19/32"	5-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-54A
5-23/32"	5-3/16"	CAD PLATED	UNDRILLED SHANK	AN5-55A
5-27/32"	5-5/16"	CAD PLATED	UNDRILLED SHANK	AN5-56A
6-3/32"	5-9/16"	CAD PLATED	UNDRILLED SHANK	AN5-60A
6-15/32"	5-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-63A
6-19/32"	6-1/16"	CAD PLATED	UNDRILLED SHANK	AN5-64A
7-7/32"	6-11/16"	CAD PLATED	UNDRILLED SHANK	AN5-71A
7-15/32"	6-15/16"	CAD PLATED	UNDRILLED SHANK	AN5-73A
5/8"	3/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-5A
3/4"	5/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-6A
7/8"	7/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-7A
1"	9/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-10A
1-1/8"	11/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-11A
1-1/4"	13/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-12A
1-3/8"	15/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-13A
1-1/2"	1-1/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-14A
1-5/8"	1-3/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-15A
1-3/4"	1-5/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-16A
1-7/8"	1-7/16"	431 STAINLESS	UNDRILLED SHANK	AN5C-17A

LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
1-3/32"	9/16"	CAD PLATED	DRILLED HEAD & SHANK	AN5H-10
1-11/32"	13/16"	CAD PLATED	DRILLED HEAD & SHANK	AN5H-12
1-23/32"	1-3/16"	CAD PLATED	DRILLED HEAD & SHANK	AN5H-15
2-3/32"	1-9/16"	CAD PLATED	DRILLED HEAD & SHANK	AN5H-20
2-21/32"	2-1/4"	CAD PLATED	DRILLED HEAD & SHANK	AN5H-22
19/32"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-4A
23/32"	3/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-5A
27/32"	5/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-6A
31/32"	7/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-7A
1-3/32"	9/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-10A
1-7/32"	11/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-11A
1-11/32"	13/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-12A
1-15/32"	15/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-13A
1-19/32"	1-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-14A
1-23/32"	1-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-15A
1-31/32"	1-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-17A
2-3/32"	1-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-20A
2-7/32"	1-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-21A
2-15/32"	1-15/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-23A
2-19/32"	2-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-24A
2-23/32"	2-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-25A
2-27/32"	2-5/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-26A
3-7/32"	2-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-31A
3-23/32"	3-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN5H-35A

FASTENERS & HARDWARE

BOLT AN6 - 3/8" (24) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 3/8-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



BOLT AN6 - 3/8" (24) - UNDRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 3/8-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
45/64"	1/16"	CAD PLATED	DRILLED SHANK	AN6-5
53/64"	3/16"	CAD PLATED	DRILLED SHANK	AN6-6
61/64"	5/16"	CAD PLATED	DRILLED SHANK	AN6-7
1-3/32"	9/16"	CAD PLATED	DRILLED SHANK	AN6-10
1-5/64"	7/16"	CAD PLATED	DRILLED SHANK	AN6-11
1-21/64"	11/16"	CAD PLATED	DRILLED SHANK	AN6-12
1-29/64"	13/16"	CAD PLATED	DRILLED SHANK	AN6-13
1-37/64"	15/16"	CAD PLATED	DRILLED SHANK	AN6-14
1-45/64"	1-1/16"	CAD PLATED	DRILLED SHANK	AN6-15
1-53/64"	1-3/16"	CAD PLATED	DRILLED SHANK	AN6-16
1-61/64"	1-5/16"	CAD PLATED	DRILLED SHANK	AN6-17
2-5/64"	1-7/16"	CAD PLATED	DRILLED SHANK	AN6-20
2-13/64"	1-9/16"	CAD PLATED	DRILLED SHANK	AN6-21
2-21/64"	1-11/16"	CAD PLATED	DRILLED SHANK	AN6-22
2-29/64"	1-13/16"	CAD PLATED	DRILLED SHANK	AN6-23
2-37/64"	1-15/16"	CAD PLATED	DRILLED SHANK	AN6-24
2-45/64"	2-1/16"	CAD PLATED	DRILLED SHANK	AN6-25
2-53/64"	2-3/16"	CAD PLATED	DRILLED SHANK	AN6-26
2-61/64"	2-5/16"	CAD PLATED	DRILLED SHANK	AN6-27
3-5/64"	2-7/16"	CAD PLATED	DRILLED SHANK	AN6-30
3-13/64"	2-9/16"	CAD PLATED	DRILLED SHANK	AN6-31
3-21/64"	2-11/16"	CAD PLATED	DRILLED SHANK	AN6-32
3-29/64"	2-13/16"	CAD PLATED	DRILLED SHANK	AN6-33
3-37/64"	2-15/16"	CAD PLATED	DRILLED SHANK	AN6-34
3-45/64"	3-1/16"	CAD PLATED	DRILLED SHANK	AN6-35
3-53/64"	3-3/16"	CAD PLATED	DRILLED SHANK	AN6-36
3-61/64"	3-5/16"	CAD PLATED	DRILLED SHANK	AN6-37
4-5/64"	3-7/16"	CAD PLATED	DRILLED SHANK	AN6-40
4-13/64"	3-9/16"	CAD PLATED	DRILLED SHANK	AN6-41
4-21/64"	3-11/16"	CAD PLATED	DRILLED SHANK	AN6-42
4-29/64"	3-13/16"	CAD PLATED	DRILLED SHANK	AN6-43
4-37/64"	3-15/16"	CAD PLATED	DRILLED SHANK	AN6-44
4-45/64"	4-1/16"	CAD PLATED	DRILLED SHANK	AN6-45
4-53/64"	4-3/16"	CAD PLATED	DRILLED SHANK	AN6-46
4-61/64"	4-5/16"	CAD PLATED	DRILLED SHANK	AN6-47
5-5/64"	4-7/16"	CAD PLATED	DRILLED SHANK	AN6-50
5-13/64"	4-9/16"	CAD PLATED	DRILLED SHANK	AN6-51
5-21/64"	4-11/16"	CAD PLATED	DRILLED SHANK	AN6-52
5-29/64"	4-13/16"	CAD PLATED	DRILLED SHANK	AN6-53
5-37/64"	4-15/16"	CAD PLATED	DRILLED SHANK	AN6-54
5-45/64"	5-1/16"	CAD PLATED	DRILLED SHANK	AN6-55
5-53/64"	5-3/16"	CAD PLATED	DRILLED SHANK	AN6-56
5-61/64"	5-5/16"	CAD PLATED	DRILLED SHANK	AN6-57
6-5/64"	5-7/16"	CAD PLATED	DRILLED SHANK	AN6-60

LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
45/64"	1/16"	CAD PLATED	UNDRILLED SHANK	AN6-5A
53/64"	3/16"	CAD PLATED	UNDRILLED SHANK	AN6-6A
61/64"	5/16"	CAD PLATED	UNDRILLED SHANK	AN6-7A
1-3/32"	9/16"	CAD PLATED	UNDRILLED SHANK	AN6-10A
1-5/64"	7/16"	CAD PLATED	UNDRILLED SHANK	AN6-11A
1-21/64"	11/16"	CAD PLATED	UNDRILLED SHANK	AN6-12A
1-29/64"	13/16"	CAD PLATED	UNDRILLED SHANK	AN6-13A
1-37/64"	15/16"	CAD PLATED	UNDRILLED SHANK	AN6-14A
1-45/64"	1-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-15A
1-53/64"	1-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-16A
1-61/64"	1-5/16"	CAD PLATED	UNDRILLED SHANK	AN6-17A
2-5/64"	1-7/16"	CAD PLATED	UNDRILLED SHANK	AN6-20A
2-13/64"	1-9/16"	CAD PLATED	UNDRILLED SHANK	AN6-21A
2-21/64"	1-11/16"	CAD PLATED	UNDRILLED SHANK	AN6-22A
2-29/64"	1-13/16"	CAD PLATED	UNDRILLED SHANK	AN6-23A
2-37/64"	1-15/16"	CAD PLATED	UNDRILLED SHANK	AN6-24A
2-45/64"	2-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-25A
2-53/64"	2-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-26A
2-61/64"	2-5/16"	CAD PLATED	UNDRILLED SHANK	AN6-27A
3-5/64"	2-7/16"	CAD PLATED	UNDRILLED SHANK	AN6-30A
3-13/64"	2-9/16"	CAD PLATED	UNDRILLED SHANK	AN6-31A
3-21/64"	2-11/16"	CAD PLATED	UNDRILLED SHANK	AN6-32A
3-29/64"	2-13/16"	CAD PLATED	UNDRILLED SHANK	AN6-33A
3-37/64"	2-15/16"	CAD PLATED	UNDRILLED SHANK	AN6-34A
3-45/64"	3-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-35A
3-53/64"	3-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-36A
3-61/64"	3-5/16"	CAD PLATED	UNDRILLED SHANK	AN6-37A
4-5/64"	3-7/16"	CAD PLATED	UNDRILLED SHANK	AN6-40A
4-13/64"	3-9/16"	CAD PLATED	UNDRILLED SHANK	AN6-41A
4-21/64"	3-11/16"	CAD PLATED	UNDRILLED SHANK	AN6-42A
4-29/64"	3-13/16"	CAD PLATED	UNDRILLED SHANK	AN6-43A
4-37/64"	3-15/16"	CAD PLATED	UNDRILLED SHANK	AN6-44A
4-45/64"	4-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-45A
4-53/64"	4-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-46A
4-61/64"	4-5/16"	CAD PLATED	UNDRILLED SHANK	AN6-47A
5-5/64"	4-7/16"	CAD PLATED	UNDRILLED SHANK	AN6-50A
5-13/64"	4-9/16"	CAD PLATED	UNDRILLED SHANK	AN6-51A
5-21/64"	4-11/16"	CAD PLATED	UNDRILLED SHANK	AN6-52A
5-29/64"	4-13/16"	CAD PLATED	UNDRILLED SHANK	AN6-53A
5-37/64"	4-15/16"	CAD PLATED	UNDRILLED SHANK	AN6-54A
5-45/64"	5-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-55A
5-53/64"	5-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-56A
5-61/64"	5-5/16"	CAD PLATED	UNDRILLED SHANK	AN6-57A
6-5/64"	5-7/16"	CAD PLATED	UNDRILLED SHANK	AN6-60A
6-29/64"	5-13/16"	CAD PLATED	UNDRILLED SHANK	AN6-63A
6-45/64"	6-1/16"	CAD PLATED	UNDRILLED SHANK	AN6-65A
7-27/32"	7-3/16"	CAD PLATED	UNDRILLED SHANK	AN6-76A
1-3/32"	7/16"	431 STAINLESS	UNDRILLED SHANK	AN6C-10A
1-31/32"	1-5/16"	431 STAINLESS	UNDRILLED SHANK	AN6C-17A

FASTENERS & HARDWARE

BOLT AN6 - 3/8" (24) - DRILLED HEAD

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 3/8-24. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
45/64"	1/16"	CAD PLATED	DRILLED HEAD & SHANK	AN6H-5
2-21/64"	1-11/16"	CAD PLATED	DRILLED HEAD & SHANK	AN6H-22
45/64"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-5A
53/64"	3/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-6A
61/64"	5/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-7A
1-3/32"	9/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-10A
1-5/64"	7/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-11A
1-21/64"	11/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-12A
1-29/64"	13/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-13A
1-37/64"	15/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-14A
1-45/64"	1-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-15A
1-61/64"	1-5/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-17A
2-5/64"	1-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-20A
2-13/64"	1-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-21A
2-21/64"	1-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-22A
2-45/64"	2-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-25A
3-13/64"	2-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-31A
3-21/64"	2-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-32A
3-37/64"	2-15/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-34A
3-53/64"	3-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-36A
3-61/64"	3-5/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-37A
4-5/64"	3-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-40A
4-13/64"	3-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-41A
4-21/64"	3-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-42A
4-29/64"	3-13/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-43A
4-45/64"	4-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-45A
4-53/64"	4-3/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-46A
5-5/64"	4-7/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-50A
5-13/64"	4-9/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-51A
5-21/64"	4-11/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-52A
5-29/64"	4-13/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-53A
5-37/64"	4-15/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-54A
5-45/64"	5-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN6H-55A

BOLT AN7 - 7/16" (20) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 7/16-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
27/32"	3/16"	CAD PLATED	DRILLED SHANK	AN7-6
1-3/32"	7/16"	CAD PLATED	DRILLED SHANK	AN7-10
1-7/32"	9/16"	CAD PLATED	DRILLED SHANK	AN7-11
1-11/32"	11/16"	CAD PLATED	DRILLED SHANK	AN7-12
1-15/32"	13/16"	CAD PLATED	DRILLED SHANK	AN7-13
1-19/32"	15/16"	CAD PLATED	DRILLED SHANK	AN7-14
1-31/32"	1-5/16"	CAD PLATED	DRILLED SHANK	AN7-17
1-23/32"	1-1/16"	CAD PLATED	DRILLED SHANK	AN7-15
1-27/32"	1-3/16"	CAD PLATED	DRILLED SHANK	AN7-16
1-31/32"	1-5/16"	CAD PLATED	DRILLED SHANK	AN7-17
2-3/32"	1-7/16"	CAD PLATED	DRILLED SHANK	AN7-20
2-7/32"	1-9/16"	CAD PLATED	DRILLED SHANK	AN7-21
2-11/32"	1-11/16"	CAD PLATED	DRILLED SHANK	AN7-22
2-15/32"	1-13/16"	CAD PLATED	DRILLED SHANK	AN7-23
2-19/32"	1-15/16"	CAD PLATED	DRILLED SHANK	AN7-24
2-23/32"	2-1/8"	CAD PLATED	DRILLED SHANK	AN7-25
2-27/32"	2-3/16"	CAD PLATED	DRILLED SHANK	AN7-26
2-31/32"	2-5/16"	CAD PLATED	DRILLED SHANK	AN7-27
3-3/32"	2-7/16"	CAD PLATED	DRILLED SHANK	AN7-30
3-7/32"	2-9/16"	CAD PLATED	DRILLED SHANK	AN7-31
3-11/32"	2-11/16"	CAD PLATED	DRILLED SHANK	AN7-32
3-15/32"	2-13/16"	CAD PLATED	DRILLED SHANK	AN7-33
3-19/32"	2-15/16"	CAD PLATED	DRILLED SHANK	AN7-34
3-23/32"	3-1/16"	CAD PLATED	DRILLED SHANK	AN7-35
3-27/32"	3-3/16"	CAD PLATED	DRILLED SHANK	AN7-36
3-31/32"	3-5/16"	CAD PLATED	DRILLED SHANK	AN7-37
4-3/32"	3-7/16"	CAD PLATED	DRILLED SHANK	AN7-40
4-7/32"	3-9/16"	CAD PLATED	DRILLED SHANK	AN7-41
4-11/32"	3-11/16"	CAD PLATED	DRILLED SHANK	AN7-42
4-15/32"	3-13/16"	CAD PLATED	DRILLED SHANK	AN7-43
4-19/32"	3-15/16"	CAD PLATED	DRILLED SHANK	AN7-44
4-23/32"	4-1/16"	CAD PLATED	DRILLED SHANK	AN7-45
4-27/32"	4-3/16"	CAD PLATED	DRILLED SHANK	AN7-46
4-31/32"	4-5/16"	CAD PLATED	DRILLED SHANK	AN7-47
5-3/32"	4-7/16"	CAD PLATED	DRILLED SHANK	AN7-50
5-11/32"	4-11/16"	CAD PLATED	DRILLED SHANK	AN7-52

BOLT AN7 - 7/16" (20) - DRILLED HEAD

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 7/16-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
23/32"	1/16"	CAD PLATED	DRILLED HEAD & SHANK	AN7H-5
1-15/32"	13/16"	CAD PLATED	DRILLED HEAD & SHANK	AN7H-13
23/32"	1/16"	CAD PLATED	DRILLED HEAD ONLY	AN7H-22A

FASTENERS & HARDWARE

BOLT AN7 - 7/16" (20) - UNDRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 7/16-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
27/32"	3/16"	CAD PLATED	UNDRILLED SHANK	AN7-6A
31/32"	5/16"	CAD PLATED	UNDRILLED SHANK	AN7-7A
1-3/32"	7/16"	CAD PLATED	UNDRILLED SHANK	AN7-10A
1-7/32"	9/16"	CAD PLATED	UNDRILLED SHANK	AN7-11A
1-11/32"	11/16"	CAD PLATED	UNDRILLED SHANK	AN7-12A
1-15/32"	13/16"	CAD PLATED	UNDRILLED SHANK	AN7-13A
1-19/32"	15/16"	CAD PLATED	UNDRILLED SHANK	AN7-14A
1-23/32"	1-1/16"	CAD PLATED	UNDRILLED SHANK	AN7-15A
1-27/32"	1-3/16"	CAD PLATED	UNDRILLED SHANK	AN7-16A
1-31/32"	1-5/16"	CAD PLATED	UNDRILLED SHANK	AN7-17A
2-3/32"	1-7/16"	CAD PLATED	UNDRILLED SHANK	AN7-20A
2-7/32"	1-9/16"	CAD PLATED	UNDRILLED SHANK	AN7-21A
2-11/32"	1-11/16"	CAD PLATED	UNDRILLED SHANK	AN7-22A
2-15/32"	1-13/16"	CAD PLATED	UNDRILLED SHANK	AN7-23A
2-19/32"	1-15/16"	CAD PLATED	UNDRILLED SHANK	AN7-24A
2-23/32"	2-1/8"	CAD PLATED	UNDRILLED SHANK	AN7-25A
2-27/32"	2-3/16"	CAD PLATED	UNDRILLED SHANK	AN7-26A
2-31/32"	2-5/16"	CAD PLATED	UNDRILLED SHANK	AN7-27A
3-3/32"	2-7/16"	CAD PLATED	UNDRILLED SHANK	AN7-30A
3-7/32"	2-9/16"	CAD PLATED	UNDRILLED SHANK	AN7-31A
3-11/32"	2-11/16"	CAD PLATED	UNDRILLED SHANK	AN7-32A
3-15/32"	2-13/16"	CAD PLATED	UNDRILLED SHANK	AN7-33A
3-19/32"	2-15/16"	CAD PLATED	UNDRILLED SHANK	AN7-34A
3-23/32"	3-1/16"	CAD PLATED	UNDRILLED SHANK	AN7-35A
3-27/32"	3-3/16"	CAD PLATED	UNDRILLED SHANK	AN7-36A
3-31/32"	3-5/16"	CAD PLATED	UNDRILLED SHANK	AN7-37A
4-3/32"	3-7/16"	CAD PLATED	UNDRILLED SHANK	AN7-40A
4-7/32"	3-9/16"	CAD PLATED	UNDRILLED SHANK	AN7-41A
4-11/32"	3-11/16"	CAD PLATED	UNDRILLED SHANK	AN7-42A
4-15/32"	3-13/16"	CAD PLATED	UNDRILLED SHANK	AN7-43A
4-19/32"	3-15/16"	CAD PLATED	UNDRILLED SHANK	AN7-44A
4-23/32"	4-1/16"	CAD PLATED	UNDRILLED SHANK	AN7-45A
4-27/32"	4-3/16"	CAD PLATED	UNDRILLED SHANK	AN7-46A
4-31/32"	4-5/16"	CAD PLATED	UNDRILLED SHANK	AN7-47A
5-3/32"	4-7/16"	CAD PLATED	UNDRILLED SHANK	AN7-50A
5-1/4"	4-11/16"	CAD PLATED	UNDRILLED SHANK	AN7-52A
5-23/32"	5-1/16"	CAD PLATED	UNDRILLED SHANK	AN7-55A
5-31/32"	5-5/16"	CAD PLATED	UNDRILLED SHANK	AN7-57A

BOLT AN8 - 1/2" (20) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/2-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
1-3/32"	5/16"	CAD PLATED	DRILLED SHANK	AN8-10
1-7/32"	7/16"	CAD PLATED	DRILLED SHANK	AN8-11
1-11/32"	9/16"	CAD PLATED	DRILLED SHANK	AN8-12
1-15/32"	11/16"	CAD PLATED	DRILLED SHANK	AN8-13
1-23/32"	15/16"	CAD PLATED	DRILLED SHANK	AN8-15
1-27/32"	1-1/16"	CAD PLATED	DRILLED SHANK	AN8-16
1-31/32"	1-3/16"	CAD PLATED	DRILLED SHANK	AN8-17
2-3/32"	1-5/16"	CAD PLATED	DRILLED SHANK	AN8-20
2-7/32"	1-7/16"	CAD PLATED	DRILLED SHANK	AN8-21
2-11/32"	1-9/16"	CAD PLATED	DRILLED SHANK	AN8-22
2-15/32"	1-11/16"	CAD PLATED	DRILLED SHANK	AN8-23
2-19/32"	1-13/16"	CAD PLATED	DRILLED SHANK	AN8-24
2-23/32"	1-15/16"	CAD PLATED	DRILLED SHANK	AN8-25
2-27/32"	2-1/16"	CAD PLATED	DRILLED SHANK	AN8-26
2-31/32"	2-3/16"	CAD PLATED	DRILLED SHANK	AN8-27
3-3/32"	2-5/16"	CAD PLATED	DRILLED SHANK	AN8-30
3-7/32"	2-7/16"	CAD PLATED	DRILLED SHANK	AN8-31
3-11/32"	2-9/16"	CAD PLATED	DRILLED SHANK	AN8-32
3-15/32"	2-11/16"	CAD PLATED	DRILLED SHANK	AN8-33
3-19/32"	2-13/16"	CAD PLATED	DRILLED SHANK	AN8-34
3-23/32"	2-15/16"	CAD PLATED	DRILLED SHANK	AN8-35
3-27/32"	3-1/16"	CAD PLATED	DRILLED SHANK	AN8-36
3-31/32"	3-3/16"	CAD PLATED	DRILLED SHANK	AN8-37
4-3/32"	3-5/16"	CAD PLATED	DRILLED SHANK	AN8-40
4-7/32"	3-7/16"	CAD PLATED	DRILLED SHANK	AN8-41
4-9/32"	3-9/16"	CAD PLATED	DRILLED SHANK	AN8-42
4-15/32"	3-11/16"	CAD PLATED	DRILLED SHANK	AN8-43
4-19/32"	3-13/16"	CAD PLATED	DRILLED SHANK	AN8-44
4-23/32"	3-15/16"	CAD PLATED	DRILLED SHANK	AN8-45
4-31/32"	4-3/16"	CAD PLATED	DRILLED SHANK	AN8-47
5-3/32"	4-5/16"	CAD PLATED	DRILLED SHANK	AN8-50
6-3/32"	5-5/16"	CAD PLATED	DRILLED SHANK	AN8-60
6-19/32"	5-13/16"	CAD PLATED	DRILLED SHANK	AN8-64

FASTENERS & HARDWARE

BOLT AN8 - 1/2" (20) - DRILLED SHANK

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/2-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
1-7/32"	7/16"	CAD PLATED	UNDRILLED SHANK	AN8-11A
1-15/32"	11/16"	CAD PLATED	UNDRILLED SHANK	AN8-13A
1-19/32"	13/16"	CAD PLATED	UNDRILLED SHANK	AN8-14A
1-23/32"	15/16"	CAD PLATED	UNDRILLED SHANK	AN8-15A
1-27/32"	1-1/16"	CAD PLATED	UNDRILLED SHANK	AN8-16A
1-31/32"	1-3/16"	CAD PLATED	UNDRILLED SHANK	AN8-17A
2-3/32"	1-5/16"	CAD PLATED	UNDRILLED SHANK	AN8-20A
2-7/32"	1-7/16"	CAD PLATED	UNDRILLED SHANK	AN8-21A
2-11/32"	1-9/16"	CAD PLATED	UNDRILLED SHANK	AN8-22A
2-15/32"	1-11/16"	CAD PLATED	UNDRILLED SHANK	AN8-23A
2-19/32"	1-13/16"	CAD PLATED	UNDRILLED SHANK	AN8-24A
2-23/32"	1-15/16"	CAD PLATED	UNDRILLED SHANK	AN8-25A
2-27/32"	2-1/16"	CAD PLATED	UNDRILLED SHANK	AN8-26A
2-31/32"	2-3/16"	CAD PLATED	UNDRILLED SHANK	AN8-27A
3-3/32"	2-5/16"	CAD PLATED	UNDRILLED SHANK	AN8-30A
3-7/32"	2-7/16"	CAD PLATED	UNDRILLED SHANK	AN8-31A
3-11/32"	2-9/16"	CAD PLATED	UNDRILLED SHANK	AN8-32A
3-15/32"	2-11/16"	CAD PLATED	UNDRILLED SHANK	AN8-33A
3-19/32"	2-13/16"	CAD PLATED	UNDRILLED SHANK	AN8-34A
3-27/32"	3-1/16"	CAD PLATED	UNDRILLED SHANK	AN8-36A
3-31/32"	3-3/16"	CAD PLATED	UNDRILLED SHANK	AN8-37A
4-3/32"	3-5/16"	CAD PLATED	UNDRILLED SHANK	AN8-40A
4-7/32"	3-7/16"	CAD PLATED	UNDRILLED SHANK	AN8-41A
4-9/32"	3-9/16"	CAD PLATED	UNDRILLED SHANK	AN8-42A
4-15/32"	3-11/16"	CAD PLATED	UNDRILLED SHANK	AN8-43A
4-19/32"	3-13/16"	CAD PLATED	UNDRILLED SHANK	AN8-44A
4-23/32"	3-15/16"	CAD PLATED	UNDRILLED SHANK	AN8-45A
4-27/32"	4-1/16"	CAD PLATED	UNDRILLED SHANK	AN8-46A
4-31/32"	4-3/16"	CAD PLATED	UNDRILLED SHANK	AN8-47A
5-3/32"	4-5/16"	CAD PLATED	UNDRILLED SHANK	AN8-50A
5-7/32"	4-7/16"	CAD PLATED	UNDRILLED SHANK	AN8-51A
5-11/32"	4-9/16"	CAD PLATED	UNDRILLED SHANK	AN8-52A
5-15/32"	4-11/16"	CAD PLATED	UNDRILLED SHANK	AN8-53A
5-27/32"	5-1/16"	CAD PLATED	UNDRILLED SHANK	AN8-56A

BOLT AN8 - 1/2" (20) - DRILLED HEAD

Hex head airframe bolt made of alloy steel per NASM6812, cadmium finish per QQ-P-416 Type II; heat treated; rated range of 125,000-145,000 PSI, HRC 26-32 Thread: 1/2-20. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	MATERIAL	PRODUCT TYPE	PART #
1-11/32"	9/16"	CAD PLATED	DRILLED HEAD ONLY	AN8H-12A
1-23/32"	15/16"	CAD PLATED	DRILLED HEAD ONLY	AN8H-15A
1-27/32"	1-1/16"	CAD PLATED	DRILLED HEAD ONLY	AN8H-16A

CLEVIS BOLT AN23 (3/16 - 32)

Cadmium plated, drilled or undrilled, a non-corrosion-resistant steel clevis bolt that meets or exceeds double shear strength requirements per MIL-H-6875. Cadmium plated to Spec. QQ-P-416. NOTE: Most clevis bolts are not stocked with a drilled shank. If the drilled hole is countersunk, it is an acceptable substitute for the – A. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
17/32"	3/16"	DRILLED SHANK	AN23-8
19/32"	1/4"	DRILLED SHANK	AN23-9
21/32"	5/16"	DRILLED SHANK	AN23-10
23/32"	3/8"	DRILLED SHANK	AN23-11
25/32"	7/16"	DRILLED SHANK	AN23-12
27/32"	1/2"	DRILLED SHANK	AN23-13
29/32"	9/16"	DRILLED SHANK	AN23-14
31/32"	5/8"	DRILLED SHANK	AN23-15
1-1/32"	11/16"	DRILLED SHANK	AN23-16
1-3/32"	3/4"	DRILLED SHANK	AN23-17
1-5/32"	13/16"	DRILLED SHANK	AN23-18
1-7/32"	7/8"	DRILLED SHANK	AN23-19
1-9/32"	15/16"	DRILLED SHANK	AN23-20
1-11/32"	1"	DRILLED SHANK	AN23-21
1-13/32"	1-1/16"	DRILLED SHANK	AN23-22
1-15/32"	1-1/8"	DRILLED SHANK	AN23-23
1-17/32"	1-3/16"	DRILLED SHANK	AN23-24
1-21/32"	1-5/16"	DRILLED SHANK	AN23-26
1-23/32"	1-3/8"	DRILLED SHANK	AN23-27
1-25/32"	1-7/16"	DRILLED SHANK	AN23-28
1-27/32"	1-1/2"	DRILLED SHANK	AN23-29
1-31/32"	1-5/8"	DRILLED SHANK	AN23-31
2-1/32"	1-11/16"	DRILLED SHANK	AN23-32
3-5/32"	2-13/16"	DRILLED SHANK	AN23-50
17/32"	3/16"	UNDRILLED SHANK	AN23-8A
19/32"	1/4"	UNDRILLED SHANK	AN23-9A
21/32"	5/16"	UNDRILLED SHANK	AN23-10A
23/32"	3/8"	UNDRILLED SHANK	AN23-11A
25/32"	7/16"	UNDRILLED SHANK	AN23-12A
27/32"	1/2"	UNDRILLED SHANK	AN23-13A
29/32"	9/16"	UNDRILLED SHANK	AN23-14A
31/32"	5/8"	UNDRILLED SHANK	AN23-15A
1-1/32"	11/16"	UNDRILLED SHANK	AN23-16A
1-3/32"	3/4"	UNDRILLED SHANK	AN23-17A
1-5/32"	13/16"	UNDRILLED SHANK	AN23-18A
1-7/32"	7/8"	UNDRILLED SHANK	AN23-19A
1-9/32"	15/16"	UNDRILLED SHANK	AN23-20A
1-11/32"	1"	UNDRILLED SHANK	AN23-21A
1-13/32"	1-1/16"	UNDRILLED SHANK	AN23-22A
1-15/32"	1-1/8"	UNDRILLED SHANK	AN23-23A
1-17/32"	1-3/16"	UNDRILLED SHANK	AN23-24A
1-19/32"	1-1/4"	UNDRILLED SHANK	AN23-25A
1-21/32"	1-5/16"	UNDRILLED SHANK	AN23-26A
1-23/32"	1-3/8"	UNDRILLED SHANK	AN23-27A
2-1/32"	1-11/16"	UNDRILLED SHANK	AN23-32A

FASTENERS & HARDWARE

CLEVIS BOLT AN24 (1/4 - 28)

Cadmium plated, drilled or undrilled, a non-corrosion-resistant steel clevis bolt that meets or exceeds double shear strength requirements per MIL-H-6875. Cadmium plated to Spec. QQ-P-416. NOTE: Most clevis bolts are not stocked with a drilled shank. If the drilled hole is countersunk, it is an acceptable substitute for the - A. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
17/32"	3/16"	DRILLED SHANK	AN24-8
19/32"	1/4"	DRILLED SHANK	AN24-9
21/32"	5/16"	DRILLED SHANK	AN24-10
23/32"	3/8"	DRILLED SHANK	AN24-11
25/32"	7/16"	DRILLED SHANK	AN24-12
27/32"	1/2"	DRILLED SHANK	AN24-13
29/32"	9/16"	DRILLED SHANK	AN24-14
31/32"	5/8"	DRILLED SHANK	AN24-15
1-1/32"	11/16"	DRILLED SHANK	AN24-16
1-3/32"	3/4"	DRILLED SHANK	AN24-17
1-5/32"	13/16"	DRILLED SHANK	AN24-18
1-7/32"	7/8"	DRILLED SHANK	AN24-19
1-13/32"	1-1/16"	DRILLED SHANK	AN24-22
1-15/32"	1-1/8"	DRILLED SHANK	AN24-23
1-17/32"	1-3/16"	DRILLED SHANK	AN24-24
1-19/32"	1-1/4"	DRILLED SHANK	AN24-25
1-21/32"	1-5/16"	DRILLED SHANK	AN24-26
1-23/32"	1-3/8"	DRILLED SHANK	AN24-27
1-25/32"	1-7/16"	DRILLED SHANK	AN24-28
2-9/32"	1-15/16"	DRILLED SHANK	AN24-36
2-13/32"	2-1/16"	DRILLED SHANK	AN24-38
2-17/32"	2-3/16"	DRILLED SHANK	AN24-40
2-29/32"	2-9/16"	DRILLED SHANK	AN24-46
3-1/32"	2-11/16"	DRILLED SHANK	AN24-48
19/32"	1/4"	UNDRILLED SHANK	AN24-9A
21/32"	5/16"	UNDRILLED SHANK	AN24-10A
23/32"	3/8"	UNDRILLED SHANK	AN24-11A
25/32"	7/16"	UNDRILLED SHANK	AN24-12A
27/32"	1/2"	UNDRILLED SHANK	AN24-13A
29/32"	9/16"	UNDRILLED SHANK	AN24-14A
31/32"	5/8"	UNDRILLED SHANK	AN24-15A
1-1/32"	11/16"	UNDRILLED SHANK	AN24-16A
1-3/32"	3/4"	UNDRILLED SHANK	AN24-17A

CLEVIS BOLT AN25 (5/16 - 24)

Cadmium plated, drilled or undrilled, a non-corrosion-resistant steel clevis bolt that meets or exceeds double shear strength requirements per MIL-H-6875. Cadmium plated to Spec. QQ-P-416. NOTE: Most clevis bolts are not stocked with a drilled shank. If the drilled hole is countersunk, it is an acceptable substitute for the - A. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
27/32"	1/2"	DRILLED SHANK	AN24-13
31/32"	5/8"	DRILLED SHANK	AN24-15
1-1/32"	11/16"	DRILLED SHANK	AN24-16
1-3/32"	3/4"	DRILLED SHANK	AN24-17
1-5/32"	13/16"	DRILLED SHANK	AN24-18
1-13/32"	1-1/16"	DRILLED SHANK	AN24-22
27/32"	1/2"	UNDRILLED SHANK	AN24-13A
1-1/32"	11/16"	UNDRILLED SHANK	AN24-16A
1-13/32"	3/4"	UNDRILLED SHANK	AN24-22A

EYEBOLT AN42B: 3/16" SHANK, 3/16" HOLE, 1032 THREADS

Eyebolts (drilled and undrilled available) 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 cadmium plated in same manner as AN3-AN8 aircraft bolts. Minimum tensile strength 125,000 psi. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
15/32"	1/16"	DRILLED SHANK	AN42B-3
5/8"	1/4"	DRILLED SHANK	AN42B-5
1"	5/8"	DRILLED SHANK	AN42B-10
1-1/4"	7/8"	DRILLED SHANK	AN42B-12
1-3/8"	1"	DRILLED SHANK	AN42B-13
1-1/2"	1-1/8"	DRILLED SHANK	AN42B-14
1-5/8"	1-1/8"	DRILLED SHANK	AN42B-15
1-3/4"	1-3/8"	DRILLED SHANK	AN42B-16
1-7/8"	1-1/2"	DRILLED SHANK	AN42B-17
2"	1-5/8"	DRILLED SHANK	AN42B-20
2-1/4"	1-5/8"	DRILLED SHANK	AN42B-22
2-1/2"	2-1/8"	DRILLED SHANK	AN42B-24
2-5/8"	2-1/4"	DRILLED SHANK	AN42B-25
2-7/8"	2-1/2"	DRILLED SHANK	AN42B-27
1"	5/8"	UNDRILLED SHANK	AN42B-10A
2-3/8"	2"	UNDRILLED SHANK	AN42B-23A
2-5/8"	2-1/4"	UNDRILLED SHANK	AN42B-25A
2-7/8"	2-1/2"	UNDRILLED SHANK	AN42B-27A
3"	2-5/8"	UNDRILLED SHANK	AN42B-30A

EYEBOLT AN43B: 1/4" SHANK, 3/16" HOLE, 1/4-28 THREADS

Eyebolts (drilled and undrilled available) 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 cadmium plated in same manner as AN3-AN8 aircraft bolts. Minimum tensile strength 125,000 psi. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
1/2"	3/16"	DRILLED SHANK	AN43B-4
3/4"	5/16"	DRILLED SHANK	AN43B-6
1"	5/8"	DRILLED SHANK	AN43B-10
2-1/4"	1-13/16"	DRILLED SHANK	AN43B-22
2-3/8"	1-15/16"	DRILLED SHANK	AN43B-23
2-5/8"	2-3/16"	DRILLED SHANK	AN43B-25
3-3/4"	3-3/8"	DRILLED SHANK	AN43B-36
1-1/2"	1-1/16"	UNDRILLED SHANK	AN43B-14A
1-5/8"	1-3/16"	UNDRILLED SHANK	AN43B-15A
1-3/4"	1-5/16"	UNDRILLED SHANK	AN43B-16A
2-1/4"	1-13/16"	UNDRILLED SHANK	AN43B-22A
2-7/8"	2-1/2"	UNDRILLED SHANK	AN43B-25A
3"	2-5/8"	UNDRILLED SHANK	AN43B-26A

EYEBOLT AN44: 5/16" SHANK, 1/4" HOLE, 5/16-24 THREADS

Eyebolts (drilled and undrilled available) 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 cadmium plated in same manner as AN3-AN8 aircraft bolts. Minimum tensile strength 125,000 psi. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
1-1/4"	13/16"	DRILLED SHANK	AN44-12
1-3/4"	1-7/16"	DRILLED SHANK	AN44-17
2"	1-9/16"	DRILLED SHANK	AN44-20
1-5/8"	1-3/16"	UNDRILLED SHANK	AN44-15A

EYEBOLT AN46: 3/8" SHANK, 3/8" HOLE, 3/8-24 THREADS

Eyebolts (drilled and undrilled available) 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 cadmium plated in same manner as AN3-AN8 aircraft bolts. Minimum tensile strength 125,000 psi. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
7/8"	5/16"	DRILLED SHANK	AN46-7
2-7/8"	2-1/16"	UNDRILLED SHANK	AN46-27A
3"	2-7/16"	UNDRILLED SHANK	AN46-30A

AN174 DRILLED BOLTS

Close tolerance hex head bolt with drilled shank. Non-corrosion-resistant cadmium-plated steel machine bolts. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.



GRIP	LENGTH	I.D.	PART #
0.8125	1.2813	3332	AN174-12
2.0625	2.5313	3332	AN174-24

MS20073 ENGINE BOLT

Bolts are supplied with three holes drilled through each head for the application of lock wire. Bolts available are 3/8-24 thread diameter size. Available while supplies last.



LENGTH NOMINAL	LENGTH GRIP	PART #
1.297	0.625	MS20073-06-12
1.922	1.250	MS20073-06-17
4.047	3.375	MS20073-06-40

FASTENERS & HARDWARE

NAS TENSION BOLT

Nas bolt, shear, hexagon head modified, short thread. Alloy steel 160,000 – 180,000 psi per MIL-H-6875. (Available while supplies last). Material: Alloy Steel;



Finish: Cadmium Per AMS-QQ-P-416 type II, Class 2. Heat Treat: 160-180 KSI Per AMS2759. 1104 Series: Tensile – 6,470lbs min, Shear – 9,300lbs min. 1106 Series: Tensile – 15,200lbs min, Shear – 21,000lbs min. Can be used with our Nuts, Washers, and Cotter, Cowl & Clevis Pins.

LENGTH NOMINAL	LENGTH GRIP	PRODUCT TYPE	PART #
0.466	1/4"	1/4"-28	NAS1104-4
5/8"	3/8"	1/4"-28	NAS1104-5
0.754	0.438	1/4"-28	NAS1104-7
0.878	0.562	1/4"-28	NAS1104-9D
0.941	0.625	1/4"-28	NAS1104-10
1.004	0.688	1/4"-28	NAS1104-11
1.391	1"	3/8"-24	NAS1106-16
2-3/4"	2-3/8"	3/8"-24	NAS1106-38
3-1/8"	2.750	1/4"-28	NAS1104-44
3.500	3.125	3/8"-24	NAS1106-50

STAINLESS STEEL SAFETY WIRE

Corrosion and heat resistant safety wire to AMS 5687, 1800° F. Pound Spool of .032 contains approximately 362 feet, .041 contains approximately 221 feet.



Benefits: Serves as a safety wiring mechanism to prevent the fastener from falling out or loosening from vibrations. Dispensing canisters will not degrade and they will keep your wire free of grease and other corrosive materials. Applications: The safety wire is typically threaded through the fastener hole then twisted to a part or another fastener then is twisted again.

WIRE SIZE	CAN SIZE	PART #
0.020	1 LB	MS20995C-020
0.025	1 LB	MS20995C-025
0.032	1/4 LB	MS20995C-032-1/4
0.032	1 LB	MS20995C-032
0.041	1/4 LB	MS20995C-041-1/4
0.041	1 LB	MS20995C-041

BRASS SAFETY WIRE

Breakaway safety lock wire is ideal for securing tags and fasteners on aircraft. These breakaway lock wires serve as a safety wiring mechanism to prevent fasteners from loosening or falling out in all high-stress applications. FAA approved breakaway safety lock wire is fabricated from high quality brass to ensure strong resistance to corrosion. .032 appr. 358' and .041 appr. 218'. Follow ASTM B134 safety standards, especially in aerospace applications. BENEFITS: Provides resistance for fasteners from self-loosening. Secure tags and fasteners from falling.



WIRE SIZE	CAN SIZE	PART #
0.020	1 LB	BRASS-020
0.032	1 LB	BRASS-032
0.041	1 LB	BRASS-041

TORQUE SEAL

Provides an easy visual means of identifying movement or loosening of fittings, nuts, etc. on critical components after they are properly torqued or positioned. Fast drying adhesion to all metals and most other surfaces. Sealant becomes brittle and will crack under movement. 1/2oz tube.



TUBE SIZE	PART #
1/2 OZ	F900-BLUE
1/2 OZ	F900-GREEN
1/2 OZ	F900-RED
1/2 OZ	F900-WHITE
1/2 OZ	F900-YELLOW
1/2 OZ (ORANGE)	F900

HARDWARE ORGANIZER

2 sizes clear plastic boxes with hinged lid. Large: 9" x 13" x 2-5/8" deep, 24 compartments. Small: 11" x 6-3/4" x 1-1/4" deep, 18 compartments. Each compartment 1-3/4" x 2". Ideal for hardware. LPB-1 can be used with the Storage Rack.



BOX SIZE	SECTIONS	PART #
11" X 6-3/4" X 1-1/4"	18	SMPB-1
9" X 13" X 2-5/8"	24	LPB-1

STORAGE RACK

This unit holds 5 of the large clear boxes (LPB-1) to create a compact and efficient small parts storage system. Made of gray baked cold rolled steel, rack has keyhole slots for wall mounting and handle for carrying. Bolt holes are provided for stacking more than one unit. Clear boxes sold separately.



HOLDS 5	PART #
LPB-1	RACK-L

INCONEL SAFETY WIRE

Uncoated inconel wire for general lock wire use above 700 degrees F. Good choice for hot wiring. Meets QQW-390 annealed. Price is per foot.



WIRE SIZE	PART #
0.032	NASM20995N32
0.040	NASM20995N40

LOCTITE STICK THREADLOCKER

Non spill able semi solid stick formula thread lockers allow easy application in overhead or other difficult applications without the messy waste of liquids. Compact 9 gram stick is small enough to carry in pocket or tool box. Available in 2 strengths: Blue medium for hand tool removal or Red high requiring heat application for removal.



STRENGTH	ITEM NAME	PART #
BLUE MEDIUM	LOCTITE 248	37684
RED HIGH	LOCTITE 268	37685

ROUND SHOCK MOUNT

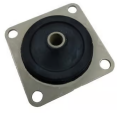
Round mount – 1-1/4" overall length as used on Cessna aircraft. Rubber center is 1/2" x 9/16" with 8-32 threaded steel projections.



SIZE	PART #
1-1/4"	1213645-1

SQUARE SHOCK MOUNT

For vibration and shock proofing on instruments and radios. Square type 100PL-6 is 1-1/4" overall x 1" hole square plate type mount has 6-lb rating, monel mounting plate, non magnetic, with rubber center. Dimension: .141" dis. base holes for 6-32 screws. .166" center hole dia. for 8-32 screws.

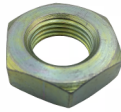


SIZE	PART #
1-1/4"	100PL6

FASTENERS & HARDWARE

AN316 CHECK NUT

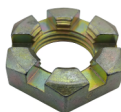
Jam, Hexagon nut steel cadmium plated in accordance with QQ-P-416. Available in right or left hand threads. Material – Carbon Steel 300 Series Cres STL; Finish – Cad Type II Per QQ-P-416 Passivate Per QQ-P-35.



THREAD SIZE	PRODUCT TYPE	PART #
1/4"-28	RIGHT	AN316-4
5/16"-24	RIGHT	AN316-5
3/8"-24	RIGHT	AN316-6
7/16"-20	RIGHT	AN316-7
1/2"-20	RIGHT	AN316-8
9/16"-20	RIGHT	AN316-9
5/8"-18	RIGHT	AN316-10
3/4"-16	RIGHT	AN316-12
1/4"-28	RIGHT	AN316C-4
5/16"-24	RIGHT	AN316C-5R
1/4"-28	LEFT	AN316-4L
5/16"-24	LEFT	AN316-5L
3/8"-24	LEFT	AN316-6L
7/16"-20	LEFT	AN316-7L
1/2"-20	LEFT	AN316-8L

AN320 SHEAR NUT

Plain castellated steel cadmium plated in accordance with QQ-P-416. Material – Carbon Steel 300 Series Cres STL; Finish – Cad Type II per QQ-P-416 Passive per QQ-P-3.



THREAD SIZE	PRODUCT TYPE	PART #
6-40	CAD PLATED	AN320-1
10-32	CAD PLATED	AN320-3
1/4"-28	CAD PLATED	AN320-4
5/16"-24	CAD PLATED	AN320-5
3/8"-24	CAD PLATED	AN320-6
7/16"-20	CAD PLATED	AN320-7
1/2"-20	CAD PLATED	AN320-8
5/8"-18	CAD PLATED	AN320-10
3/4"-16	CAD PLATED	AN320-12
10-32	STAINLESS STEEL	AN320C-3
1/4"-28	STAINLESS STEEL	AN320C-4
5/16"-24	STAINLESS STEEL	AN320C-5
3/8"-24	STAINLESS STEEL	AN320C-6

AN340 COARSE THREAD PLAIN HEX NUT

Machine screw nut coarse thread, brass. Brass used for instruments. Non-structural coarse thread, steel 50,000 PSI tensile strength minimum. (MS35649)



THREAD SIZE	PART #
4-40	AN340-4
6-32	AN340-6
6-32	AN340-B6
8-32	AN340-8
8-32	AN340-B8
10-24	AN340-10
3/8"-16	AN340-616

AN345 FINE THREAD PLAIN HEX NUT

For machine screw fine thread. Available in steel or brass (brass part number AN345- B10.) Steel 50,000 psi tensile strength minimum. (MS35650)



THREAD SIZE	PART #
10-32	AN345-10
1/4"-28	AN345-416
5/16"-24	AN345-516
3/8"-24	AN345-616
10-32	AN345-B10

AN350 WING NUT

MS35425 Plain, steel cadmium plated in accordance with QQ-P-416. 50,000 PSI tensile strength minimum.



THREAD SIZE	PART #
10-32	AN350-1032
1/4"-28	AN350-4

AN360 ENGINE NUT

MATERIAL – ALLOY STEEL PER AMS6322. FINISH – CAD PER AMS2400. HARDNESS – C19 -C26



THREAD SIZE	PART #
1/4"-28	AN360-4
5/16"-24	AN360-5

ANCHOR NUT CORNER (MS21055)

All metal corner nut that can be attached with 3/32" diameter aircraft rivets. Used in blind applications when it is difficult to use a hex nut and wrench.



THREAD SIZE	PART #
8-32	MS21055-08
10-32	MS21055-3
1/4"-20	MS21055-L4

ANCHOR NUT CORNER NYLON LOCKING (MS21081)

One lug (K2000) Cadmium plated self locking plate nut, low height, alloy steel 450° F. The -08, -3, -4 attach with 3/32" aircraft rivets.



THREAD SIZE	PART #
10-32	MS21081-3
1/4"-28	MS21081-4

ANCHOR NUT CORNER SELF LOCKING (MS21073)

Nutplate – 6-32 Thread: Self-Locking Corner Nutplate. Reduced Rivet Spacing. Low Height. Cadmium Plated Carbon Steel, 450° F. Plain Rivet Holes.



THREAD SIZE	PART #
6-32	MS21073-06
10-32	MS21073-3

ANCHOR NUT ONE LUG (MS21071)

All metal (MK2000) cadmium plated steel with low height, 450° F. Attach with 3/32" diameter aircraft rivets.



THREAD SIZE	PART #
6-32	MS21071-06
8-32	MS21071-08
10-32	MS21071-3
1/4"-28	MS21071-4

ANCHOR NUT ONE LUG SELF LOCKING (MS21051)

One lug (K2000) Cadmium plated self locking plate nut, low height, alloy steel 450° f. The -L indicates dry film lubricated. K designates countersunk or dimpled rivet hole. The -08, -3, -4 attach with 3/32" aircraft rivets.



THREAD SIZE	PART #
6-32	MS21051-L06K
6-32	MS21051-L06
8-32	MS21051-08
8-32	MS21051-L08K
10-32	MS21051-3
1/4"-28	MS21051-4

ANCHOR NUT ONE LUG SELF LOCKING FLOATING (MS21061)

One lug low height, alloy steel. Attach with 3/32" aircraft rivets. 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.



THREAD SIZE	PART #
6-32	MS21061-L06
8-32	MS21061-L08
10-32	MS21061-L3
1/4"-28	MS21061-L4

FASTENERS & HARDWARE

ANCHOR NUT THIN (MS21069)

Two lug thin (MK1000) Reduced rivet spacing. High temp. Particularly suited for use in blind close clearance areas. Attach with 3/32" diameter aircraft rivets.



THREAD SIZE	PART #
6-32	MS21069-L06K
8-32	MS21069-L08
10-32	MS21069-L3
1/4"-28	MS21069-L4

ANCHOR NUT TWO LUG (AN366)

Cadmium plated steel. Nylon locking insert. For blind mounted applications. Use 3/32" diameter rivets to attach -632, -832, -1032 and -428.



THREAD SIZE	PART #
1/4"-28	AN366F-428
6-32	AN366F-632
8-32	AN366F-832
10-32	AN366F-1032

ANCHOR NUT TWO LUG (MS21047)

Self locking (K1000) low height steel 450° F. Use 3/32" rivets to attach sizes -06, -08, -3, -4, 1/8" rivets for -5. K: designated countersunk or dimpled rivet hole. L: designated dry film lubricated (black).



THREAD SIZE	PART #
6-32	MS21047-06
6-32	MS21047-L06K
8-32	MS21047-08
8-32	MS21047-L08K
10-32	MS21047-3
10-32	MS21047-L3
10-32	MS21047-L3K
1/4"-28	MS21047-L4
5/16"-24	MS21047-L5
3/8"-24	MS21047-L6

ANCHOR NUT TWO LUG (MS21049)

(K1100) Cadmium plates self-locking nutplate, 2 lug, low height alloy steel 450 degrees F. Attach with 3/32 rivets. K: designates countersunk or dimpled rivet hole. L: designates dry film lubricated (black).



THREAD SIZE	PART #
8-32	MS21049-L08
10-32	MS21049-L3
10-32	MS21049-L3K

ANCHOR NUT TWO LUG FLOATING (MS21059)

Two lug (F5000) plated steel with dry film lubricant applied. Counterbore in base area of nut eliminates shimming to prevent bottoming on the imperfect thread. Use to allow engagement of thread in cases of bolt hole misalignment. Attach with 3/32" diameter rivet, except L6 uses 1/8" rivet. K designates countersunk or dimpled rivet hole and L designates dry film lubricated (black).



THREAD SIZE	PART #
6-32	MS21059-L06K
8-32	MS21059-L08
8-32	MS21059-L08K
10-32	MS21059-L3
10-32	MS21059-L3K
1/4"-28	MS21059-L4
5/16"-24	MS21059-L5
3/8"-24	MS21059-L6

ANCHOR NUT TWO LUG FLOATING MINIATURE (MS21075)

Reduced rivet spacing, high temp to allow engagement of thread in case of bolt hole misalignment. Counterbore in base area of nut eliminates shimming to prevent bottoming on the imperfect thread. Attach with 3/32" dia. rivet.



THREAD SIZE	PART #
8-32	MS21075-08
10-32	MS21075-3
10-32	MS21075-L3
1/4"-28	MS21075-4

ANCHOR NUT TWO LUG FLOATING (NAS1473)

Two lug floating anchor nut, self locking with cap. Steel nut and shell with aluminum alloy or steel washer cadmium plated, type II Class 2. Nut is cadmium plated, type II Class 2 plus an approved dry film lubricant. Fuel resistant black rubber seal for use up to 225 degrees F (MIL-r-6855). Can be used on fuel tanks.



THREAD SIZE	PART #
8-32	NAS1473A08
10-32	NAS1473A3

ANCHOR TYPE SPEED NUT DIMPLED

For attaching door, access plates or any part that must be fastened securely. Nuts can be welded or riveted in place. Length of rivet depends upon thickness of materials. Made of aircraft spring steel finished with phosphate and three coats of olive phenolic paint. Nuts are dimpled, use MS20246AD3 rivets for installation.



SCREW SIZE	HOLE DIAMETER	PART #
6	0.105	A6195-6Z-1D
8	0.105	A6195-8Z-1D

CAP NUT

A nut that is domed end on one side with threads on the lower end. Used with a machine threaded fastener with external or male threads. The domed end will enclose the threads to either to protect the thread or to protect nearby objects from contact with the thread. The dome gives a more finished appearance. These Acorn nuts are made of 18-8 or 316 Stainless Steel to provide corrosion resistance.



THREAD SIZE	PART #
1/4"-28	CN428
6-32	CN632
8-32	CN832
10-32	CN1032

CASTELLATED NUT (AN310)

Castellated nut used with drilled shank bolts to accept cotter pins, safety wire or clips.

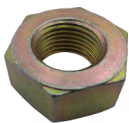


THREAD SIZE	PRODUCT TYPE	PART #
10-32	CAD PLATED	AN310-3
1/4"-28	CAD PLATED	AN310-4
5/16"-24	CAD PLATED	AN310-5
3/8"-24	CAD PLATED	AN310-6
7/16"-20	CAD PLATED	AN310-7
1/2"-20	CAD PLATED	AN310-8
9/16"-18	CAD PLATED	AN310-9
5/8"-18	CAD PLATED	AN310-10
3/4"-16	CAD PLATED	AN310-12
1-14	CAD PLATED	AN310-16
10-32	STAINLESS STEEL	AN310-C3
1/4"-28	STAINLESS STEEL	AN310-C4
5/16"-24	STAINLESS STEEL	AN310-C5
3/8"-24	STAINLESS STEEL	AN310-C6
7/16"-20	STAINLESS STEEL	AN310-C7
1/2"-20	STAINLESS STEEL	AN310-C8

FASTENERS & HARDWARE

CHECK NUT

Hexagon airframe nut, steel cadmium plated in accordance with QQ-P-416. Available in right or left hand threads. When ordering use (L) to indicate left hand.



THREAD SIZE	PRODUCT TYPE	PART #
6-40	RIGHT	AN315-640R
10-32	RIGHT	AN315-3
1/4"-28	RIGHT	AN315-4
5/16"-24	RIGHT	AN315-5
3/8"-24	RIGHT	AN315-6
7/16"-20	RIGHT	AN315-7
1/2"-20	RIGHT	AN315-8
5/8"-18	RIGHT	AN315-10
3/4"-16	RIGHT	AN315-12
6-40	LEFT	AN315-640L
10-32	LEFT	AN315-3L
1/4"-28	LEFT	AN315-4L
5/16"-24	LEFT	AN315-5L
3/8"-24	LEFT	AN315-6L

CLIP NUT

High strength forged hex nuts suitable for structural and non-structural applications in metal, plastic or composite materials. Clip portion is made of carbon steel, cadmium plated QQ-P-416, Type II, Class 1, the nut portion is made of alloy steel, cadmium plated per QQ-P-416 Type II, Class 2, molybdenum disulfide dry film lube.



THREAD SIZE	EDGE DISTANCE	PANEL THICKNESS	PART #
6-32	.180-.280	.030-.051	CN294667
8-32	.310-.500	.020-.090	CN130007
8-32	.250-.380	.020-.070	CN130008
10-32	.350-.500	.020-.090	CN130120
10-32	.350-.500	.091-.150	CN130123

DRILLED JAM NUT

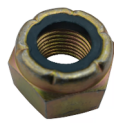
Drilled jam nut made of 4130 steel, cad plated per QQ-P-416, type II Class 2. Nuts are magnetic particle inspected in accordance with MIL-S-6758 but not marked. Intended for use the NAS513 keyed washer for positive locking of rod end terminals to hydraulic piston rods, tie rod ends, push-pull rod, etc.



THREAD SIZE	PART #
10-32(-3)	NAS509-3
1/4"-28(-4)	NAS509-4
5/16"-24(-5)	NAS509-5
3/8"-24(-6)	NAS509-6

FIBERLOCK HEX NUT (MS20365)

Cad plated, NE regular hex, light fiberlock nut. Temps to 250° F. (MS21044n)



THREAD SIZE	PART #
4-40	MS20365-440
6-32	MS20365-632
8-32	MS20365-832
10-32	MS20365-1032
1/4"-20	MS20365-420
1/4"-28	MS20365-428
5/16"-24	MS20365-524
3/8"-24	MS20365-624
7/16"-20	MS20365-720
1/2"-20	MS20365-820
9/16"-18	MS20365-918

FIBERLOCK NUT STAINLESS (MS21044)

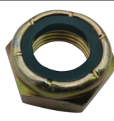
Corrosion resistant fiberlock nut self locking, non-metallic insert, hexagon regular height. Temp to 250 degrees F, Supersedes AN365C, MS20365C, NAS1021C.



THREAD SIZE	PART #
6-32	MS21044C06
8-32	MS221044C08
10-32	MS21044C3
1/4"-28	MS21044C4
5/16"-24	MS21044C5
3/8"-24	MS21044C6

FIBERLOCK NUT THIN (MS20364)

NE regular hex, light thin fiberlock nut. Temps to 250° F. (MS21083N)



THREAD SIZE	PART #
4-40	MS20364-440
6-32	MS20364-632
8-32	MS20364-832
10-32	MS20364-1032
1/4"-28	MS20364-428
5/16"-24	MS20364-524
3/8"-24	MS20364-624
7/16"-20	MS20364-720
1/2"-20	MS20364-820
9/16"-18	MS20364-1018

FLAT TYPE NUT

Vibration resistant with maximum strength, these fasteners replace threaded nuts, lock washers and spanner washers and yet weigh less. For use with Type B tapping screws. The turned up ends prevent marring of surface. Made of aircraft spring steel finished with phosphate and three coats of olive phenolic paint. Use with sheet metal screws.



SCREW SIZE	LENGTH A	WIDTH B	PART #
4	0.50	0.31	A1776-4Z-1D
8	0.63	0.44	A1778-8Z-1D
10	0.88	0.50	A1779-10Z-1D

FLOATING CLIP NUT

Monadnock floating clip nuts. Clip and nut both are made of carbon steel, heat treated, cad plated per QQ-P-416, type II, class 2. Nut also has a molydisulfide dry film lube.



THREAD SIZE	EDGE DISTANCE	PANEL THICKNESS	PART #
6-32	.380-.500	.020-.060	FCN632-43
8-32	0-.250	.020-.060	FCN832-11
8-32	0-.375	.020-.125	FCN832-26
8-32	.380-.500	.020-.160	FCN832-43
10-32	0-.250	.020-.060	FCN1032-11
10-32	0-.375	.020-.125	FCN1032-26
10-32	.380-.500	.020-.125	FCN1032-36

HEX NUT LIGHTWEIGHT REDUCED DIMENSION

Heat treated, cadmium plated steel. High temp and tensile strength. Use in limited mounting or wrenching areas. (NAS679)



THREAD SIZE	MIN AXIAL STRENGTH	PART #
4-40	1.110	MS21042-04
6-32	1.670	MS21042-06
8-32	2.490	MS21042-08
10-32	3.470	MS21042-3
10-32		MS21042-L3
1/4"-28	6.200	MS21042-4
5/16"-24	9.820	MS21042-5
3/8"-24	15.20	MS21042-6
7/16"-20	20.60	NAS1291X7
5/8"-18		NAS1423-10

FASTENERS & HARDWARE

INSTRUMENT NUT

Non magnetic, cadmium plated, cage type speed nut permits mounting of aircraft instruments to front face of panel. Cage is compressed with finger-pressure to allow insertion of legs into clearance holes. The legs spring apart upon release of pressure to receive 6-32 brass screws at back of instrument. Stock only 6-32 size. Not for use on Westach instruments. Screws are not included with nuts. See screw section of catalog for proper length and type.



SIZE	PART #
.313 (5/16")	A8942-632-493
.375 (3/8")	A8943-632-493
.375 AND OVER (3/8")	A8944-632-493

METAL LOCK NUT AN363

Metal to metal lock nut, temps to 550 °F.



THREAD SIZE	PRODUCT TYPE	PART #
6-32	CAD PLATED	AN363-632
8-32	CAD PLATED	AN363-832
10-32	CAD PLATED	AN363-1032
1/4"-28	CAD PLATED	AN363-428
5/16"-24	CAD PLATED	AN363-524
3/8"-24	CAD PLATED	AN363-624
7/16"-20	CAD PLATED	AN363-720
1/2"-20	CAD PLATED	AN363-820
5/8"-18	CAD PLATED	AN363-1018
6-32	STAINLESS STEEL	AN363C-632
8-32	STAINLESS STEEL	AN363C-832
10-32	STAINLESS STEEL	AN363C-1032
1/4"-28	STAINLESS STEEL	AN363C-428
5/16"-24	STAINLESS STEEL	AN363C-524
PIN - THREADED TAPER		AN386-1-8

NUT KIT

Kit includes 25 each: MS20365-632 through 624, AN310-3 through 6, and AN315-3 and 4, all in plastic organizer.



DESCRIPTION	PART #
NUT KIT	NP100

ZINC T-NUT

3 Prong tee nut to be used for blind fastening into wood. 5/16" diameter hole needed through wood.



THREAD SIZE	BARREL LENGTH	PART #
8-32	1/4"	TN832
10-32	5/16"	TN1032
1/4"-20	7/16"	TN1/4X20

NYLON CAP LOCKNUT

Are designed for use in place of standard and thin height hex nuts in applications where, for reasons for safety or appearance, it is desirable to cover exposed bolt ends. They are also suitable for sealing internal or external pressures, up to 80 psi past the bolt threads, provided a proper seal is effected between the nut seat and its mating surface. Maintain locking effectiveness up to 250 Degree F. The locking insert and cap are an integral part. Stock black.



THREAD SIZE	ALLOY	PART #
8-32	STEEL	21NKM82
10-32	STEEL	21NKM02
1/4"-28	STEEL	21NKE048

NYLON NUT



SIZE	PART #
10"-32	NN1032

SELF-LOCKING HEX NUT

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



THREAD SIZE	PART #
6-32	NAS679-A06
8-32	NAS679-A08
10-32	NAS679-A3
1/4"-28	NAS679-A4
5/16"-24	NAS679-A5
3/8"-24	NAS679-A6
7/16"-20	NAS679-A7

SELF-LOCKING CASTELLATED NUT

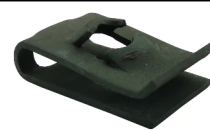
Cadmium plated steel with nylon insert, these nuts are used in applications for which slotted or castellated nuts are approved at temperature of 250° F and below. Head design is for use with drilled shank bolts, eyebolts, clevis bolts and studs. Slots in nut accommodate a cotter pin for safety purposes.



THREAD SIZE	PART #
10-32	MS17825-3
1/4"-28	MS17825-4
5/16"-24	MS17825-5
3/8"-24	MS17825-6
7/16"-20	MS17825-7

U-TYPE NUT

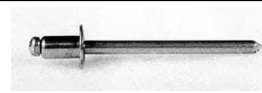
Self retaining, snaps into locked-on position over panel edge or in center panel location which eliminates welding or riveting. Ideal for blind or hard to reach locations. Made of aircraft spring steel finished with phosphate and three coats of olive phenolic paint. With relief notch, but no extrusion on lower leg. Use with sheet metal screws.



SCREW SIZE	PANEL THICKNESS	LENGTH A	WIDTH B	PART #
6	.025-.051	.61	.44	A1784-6Z-1D
6	.025-.064	.84	.44	A1785-6Z-1D
8	.025-.064	.75	.50	A1348-8Z-1D
8	.025-.064	.84	.44	A1788-8Z-1D
8	.025-.051	.84	.44	A1789-8Z-1D
8	.025-.064	.84	.44	A1787-8Z-1D
10	.025-.064	.84	.44	A1787-10Z-1D
10	.081-.094	.62	.44	A1758-10Z-1D

CHERRY N COMMERCIAL RIVET

Cherry N Commercial rivet. Stainless rivet and mandrel with protruding head, or 120 degree countersunk head.



DIAMETER	LENGTH	GRIP RANGE	SHEAR	TENSILE	PART #
<u>PROTRUDING</u>					
3/32"	1/4"	.020-.125	230 PSI	280 PSI	CCP-32
3/32"	3/8"	.126-.250	230 PSI	280 PSI	CCP-34
<u>COUNTERSUNK</u>					
3/32"	1/4"	.020-.125	230 PSI	280 PSI	CCC-32
1/8"	.225	.125-.187	450 PSI	600 PSI	CCC-42
1/8"	.400	.188-.250	450 PSI	600 PSI	CCC-44

FASTENERS & HARDWARE

CHERRY N RIVET

Monel steel, either protruding or flush.



DIAMETER	LENGTH	GRIP RANGE	PART #
100° 3/32"	1/4"	.063-.125	MSC-32
UNIVERSAL			
5/32"	.425	.126-.250	MSP-54
3/32"	3/8"	.126-.250	MSP-34
1/8"	.275	.063-.125	MSP-42
1/8"	.337	.125-.187	MSP-43
1/8"	.400	.188-.250	MSP-44
1/8"	.462	.251-.312	MSP-45
3/16"	.425	.126-.250	MSP-62
CHERRY N RIVET 3/32D			BSC-34

CHERRY Q RIVET BS SERIES

Structural, self plugging aluminum rivet with steel mandrel protruding head.



DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.275	.063-.125	BSPQ-42
1/8"	.337	.126-.187	BSPQ-43
1/8"	.400	.188-.250	BSPQ-44
5/32"	.440	.188-.250	BSPQ-54

CHERRY Q STRUCTURAL RIVET

Structural, self-plugging rivet. The rivet material is steel, cad plated and the mandrel is steel, cad plated. Protruding head.



Cherry Q rivet mandrel plugs the entire length of the rivet sleeve, providing full shear strength values for structural or load bearing applications. The specially designed mandrel of the Q rivet is engineered to effect a seal, upon installation which offers resistance to leakage. The rivet sleeve curls over end of mandrel to insure its positive retention of vibration resistance. The 1/8" diameter rivets have a minimum shear strength of 500 lbs and tensile strength of 400 lbs.

DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.462	.251-.312	SSPQ-45
1/8"	.650	.438-.500	SSPQ-48
5/32"	.300	.062-.125	SSPQ-52
5/32"	.362	.126-.187	SSPQ-53
1/8"	.224	.062-.125	CCPQ-42
1/8"			CCPQ-43
1/8"			CCPQ-44
1/8"			CCPQ-46
3/16"	.440	.126-.250	CCPQ-64

CR3212 CHERRY MAX RIVETS

100 degree flush head 5056 aluminum alloy sleeve, 8740 alloy steel stem, shear strength 50,000 psi, maximum temperature 250 degrees.



DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.161	.063-.125	CR3212-4-2
1/8"	.287	.126-.187	CR3212-4-3
1/8"	.349	.188-.250	CR3212-4-4
1/8"	.412	.251-.312	CR3212-4-5
1/8"	.474	.313-.375	CR3212-4-6
1/8"	.537	.376-.437	CR3212-4-7
1/8"	.499	.438-.500	CR3212-4-8
5/32"	.230	.063-.125	CR3212-5-2
5/32"	.293	.126-.187	CR3212-5-3
5/32"	.355	.188-.250	CR3212-5-4
5/32"	.418	.251-.312	CR3212-5-5
5/32"	.480	.313-.375	CR3212-5-6
5/32"	.543	.376-.437	CR3212-5-7
5/32"	.605	.438-.500	CR3212-5-8

CR3213 CHERRY MAX RIVETS

100 degree flush head 5056 aluminum alloy sleeve, 8740 alloy steel stem, shear strength 50,000 psi, maximum temperature 250 degrees.



DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.161	.025-.062	CR3213-4-1
1/8"	.224	.063-.125	CR3213-4-2
1/8"	.287	.126-.187	CR3213-4-3
1/8"	.349	.188-.250	CR3213-4-4
1/8"	.412	.251-.312	CR3213-4-5
1/8"	.474	.313-.375	CR3213-4-6
1/8"	.537	.376-.437	CR3213-4-7
1/8"	.599	.438-.500	CR3213-4-8
5/32"	.187	.025-.062	CR3213-5-1
5/32"	.230	.063-.125	CR3213-5-2
5/32"	.293	.126-.187	CR3213-5-3
5/32"	.355	.188-.250	CR3213-5-4
5/32"	.418	.251-.312	CR3213-5-5
5/32"	.480	.313-.375	CR3213-5-6
5/32"	.543	.376-.437	CR3213-5-7
5/32"	.605	.438-.500	CR3213-5-8
3/16"		.251-.312	CR3213-6-5

STAINLESS STEEL OR CAD PLATED STEEL CHERRY RIVET

Open end blind rivet ideal to fasten nutplates.



DIAMETER	LENGTH	GRIP RANGE	PART #
100°			
3/32"	.193	.063-.125	CCR264CS-3-2
3/32"	.255	.126-.187	CCR264CS-3-3
3/32"	.318	.188-.250	CCR264CS-3-4
3/32"	.380	.251-.312	CCR264CS-3-5
3/32"	.193	.063-.125	CCR264SS-3-2
3/32"	.255	.126-.187	CCR264SS-3-3
3/32"	.380	.188-.250	CCR264SS-3-4
3/32"	.380	.251-.312	CCR264SS-3-5
UNIVERSAL			
3/32"	.193	.063-.125	CCR274CS-3-2
3/32"	.255	.126-.187	CCR274CS-3-3
3/32"	.318	.188-.250	CCR274CS-3-4
3/32"	.193	.063-.125	CCR274SS-3-2
3/32"	.255	.126-.187	CCR274SS-3-3
3/32"	.318	.188-.250	CCR274SS-3-4

MS20470 UNIVERSAL HEAD SOLID RIVET - 1100 SOFT

Available in either hard (AD) 2117 aluminum alloy or soft(A) 1100 pure aluminum. Manufactured to MIL-R-5674. Sold by 1/8 lb only. Order 8 – 1/8 to make 1 lb. Not sold separately.



DIA	LEN	APX QTY 1/8 LB	PART #
1100 SOFT			
3/32"	3/16"	435	MS20470A3-3
3/32"	1/4"	375	MS20470A3-4
3/32"	5/16"	359	MS20470A3-5
3/32"	3/8"	299	MS20470A3-6
3/32"	7/16"	271	MS20470A3-7
3/32"	1/2"	228	MS20470A3-8
3/32"	5/8"	209	MS20470A3-10
3/32"	3/4"	250	MS20470A3-12
1/8"	3/16"	216	MS20470A4-3
1/8"	1/4"	191	MS20470A4-4
1/8"	5/16"	173	MS20470A4-5
1/8"	3/8"	154	MS20470A4-6
1/8"	7/16"	141	MS20470A4-7
1/8"	1/2"	129	MS20470A4-8
1/8"	9/16"	120	MS20470A4-9
1/8"	5/8"	104	MS20470A4-10
1/8"	3/4"	113	MS20470A4-12
1/8"	7/8"	99	MS20470A4-14
1/8"	1"	88	MS20470A4-16
5/32"	1/4"	111	MS20470A5-4
5/32"	5/16"	100	MS20470A5-5
5/32"	3/8"	100	MS20470A5-6
5/32"	7/16"	84	MS20470A5-7
5/32"	1/2"	102	MS20470A5-8
5/32"	7/8"	61	MS20470A5-15
5/32"	1"	70	MS20470A5-16
3/16"	5/16"	77	MS20470A6-5
3/16"	3/8"	59	MS20470A6-6
3/16"	7/16"	54	MS20470A6-7
3/16"	1/2"	50	MS20470A6-8
3/16"	9/16"	47	MS20470A6-9
3/16"	5/8"	41	MS20470A6-10
3/16"	1"	33	MS20470A6-16

NAS1097 100° SOLID RIVET

NAS1097 100 degree solid rivets – flush shear head made of 2117-T4 aluminum alloy. Anodized per MIL-A-8625, Type II, Class 1, yellow in color.



DIA	LEN	APX QTY 1/8 LB	PART #
1/8"	1/4"	394	NAS1097AD4-4
3/32"	.125	558	NAS1097AD3-2
3/32"	.188		NAS1097AD3-3
3/32"		785	NAS1097AD3-3.5
3/32"	1/4"	695	NAS1097AD3-4
3/32"	.312	565	NAS1097AD3-5
3/32"	1/2"	360	NAS1093AD3-8
1/8"	.188	510	NAS1097AD4-3
1/8"	.312	304	NAS1093AD4-5
1/8"	3/8"	159	NAS1097AD4-6

FASTENERS & HARDWARE

MS20426 COUNTERSUNK 100° SOLID RIVET

Available in either hard (AD) 2117 aluminum alloy or soft(A) 1100 pure aluminum. Manufactured to MIL-R-5674. Sold by 1/8 lb only. Order 8 – 1/8 to make 1 lb. Not sold separately.



MS20470 UNIVERSAL HEAD SOLID RIVET - 2117 HARD

Available in either hard (AD) 2117 aluminum alloy or soft(A) 1100 pure aluminum. Manufactured to MIL-R-5674. Sold by 1/8 lb only. Order 8 – 1/8 to make 1 lb. Not sold separately.



DIA	LENGTH	APX QTY 1/8 LB	PART #
2117 HARD			
1/16"	3/8"	1041	MS20426AD2-6
3/32"	.125	800	MS20426AD3-2
3/32"	3/16"	750	MS20426AD3-3
3/32"	7/32"	631	MS20426AD3-3.5
3/32"	1/4"	512	MS20426AD3-4
3/32"	9/32"	474	MS20426AD3-4.5
3/32"	5/16"	434	MS20426AD3-5
3/32"	11/32"	406	MS20426AD3-5.5
3/32"	3/8"	377	MS20426AD3-6
3/32"	7/16"	333	MS20426AD3-7
3/32"	1/2"	270	MS20426AD3-8
3/32"	9/16"	295	MS20426AD3-9
3/32"	5/8"	227	MS20426AD3-10
3/32"	3/4"	225	MS20426AD3-12
3/32"	1"	177	MS20426AD3-16
1/8"	3/16"	351	MS20426AD4-3
1/8"	1/4"	288	MS20426AD4-4
1/8"	5/16"	246	MS20426AD4-5
1/8"	3/8"	212	MS20426AD4-6
1/8"	7/16"	200	MS20426AD4-7
1/8"	1/2"	168	MS20426AD4-8
1/8"	9/16"	152	MS20426AD4-9
1/8"	5/8"	128	MS20426AD4-10
1/8"	11/16"	131	MS20426AD4-11
1/8"	3/4"	110	MS20426AD4-12
1/8"	7/8"	95	MS20426AD4-14
1/8"	1"	216	MS20426AD4-16
1/8"	1-1/4"	78	MS20426AD4-20
1/8"	1-3/8"	72	MS20426AD4-22
5/32"	.125	267	MS20426AD5-2
5/32"	3/16"	245	MS20426AD5-3
5/32"	1/4"	180	MS20426AD5-4
5/32"	5/16"	153	MS20426AD5-5
5/32"	3/8"	134	MS20426AD5-6
5/32"	7/16"	118	MS20426AD5-7
5/32"	1/2"	106	MS20426AD5-8
5/32"	9/16"	96	MS20426AD5-9
5/32"	5/8"	95	MS20426AD5-10
5/32"	11/16"	86	MS20426AD5-11
5/32"	3/4"	61	MS20426AD5-12
5/32"	7/8"	69	MS20426AD5-14
5/32"	1"	61	MS20426AD5-16
5/32"	1-1/8"	54	MS20426AD5-18
5/32"	1-1/2"	41	MS20426AD5-24
5/32"	2"	31	MS20426AD5-32
3/16"	1/4"	136	MS20426AD6-4
3/16"	5/16"	106	MS20426AD6-5
3/16"	3/8"	92	MS20426AD6-6
3/16"	7/16"	108	MS20426AD6-7
3/16"	1/2"	71	MS20426AD6-8
3/16"	9/16"	66	MS20426AD6-9
3/16"	5/8"	57	MS20426AD6-10
3/16"	3/4"	42	MS20426AD6-12
3/16"	7/8"	47	MS20426AD6-14
3/16"	1"	42	MS20426AD6-16
3/16"	1-1/4"	33	MS20426AD6-20
3/16"	1-3/8"	30	MS20426AD6-22
3/16"	1-1/2"	28	MS20426AD6-24
1/4"	5/8"	34	MS20426AD8-10
1/4"	13/16"	27	MS20426AD8-13
1/4"	1"	22	MS20426AD8-16
1/4"	1-1/4"	18	MS20426AD8-20
1/4"	2"	11	MS20426AD8-32

DIA	LENGTH	APX QTY 1/8 LB	PART #
1100 SOFT			
1/16"	3/8"	1041	MS20426A2-6
3/32"	.125	800	MS20426A3-2
3/32"	3/16"	750	MS20426A3-3
3/32"	1/4"	512	MS20426A3-4
3/32"	5/16"	434	MS20426A3-5
3/32"	3/8"	377	MS20426A3-6
3/32"	7/16"	333	MS20426A3-7
3/32"	1/2"	270	MS20426A3-8
3/32"	5/8"	227	MS20426A3-10
3/32"	3/4"	225	MS20426A3-12
1/8"	3/16"	351	MS20426A4-3
1/8"	1/4"	288	MS20426A4-4
1/8"	5/16"	246	MS20426A4-5
1/8"	3/8"	212	MS20426A4-6
1/8"	7/16"	200	MS20426A4-7
1/8"	1/2"	168	MS20426A4-8
1/8"	5/8"	128	MS20426A4-10
1/8"	3/4"	110	MS20426A4-12
1/8"	1"	216	MS20426A4-16
5/32"	1/4"	180	MS20426A5-4
5/32"	3/8"	134	MS20426A5-6
5/32"	7/16"	118	MS20426A5-7
5/32"	9/16"	96	MS20426A5-9
5/32"	3/4"	61	MS20426A5-12
5/32"	1"	61	MS20426A5-16
3/16"	3/8"	92	MS20426A6-6
3/16"	1/2"	71	MS20426A6-8
3/16"	5/8"	57	MS20426A6-10
3/16"	3/4"	42	MS20426A6-12
3/16"	1"	42	MS20426A6-16

SOLID RIVET KIT

Kits available in Soft, Hard, Flush or Protruding rivets. Each kit contains 1/8 lb of the following: 3/32": 3-3,3-4,3-5,3-6,3-8 1/8": 4-3,4-4,4-5,4-6,4-8 5/32": 5-4,5-6 All kits include a small plastic box with room for extra sizes.



DESCRIPTION	PART #
SOFT FLUSH	R26A
HARD FLUSH	R26AD
SOFT UNIVERSAL	R70A
HARD UNIVERSAL	R70AD

5052 ALUMINUM RIVET

5052 aluminum rivet, dome head with carbon steel break stem – open end.



GRIP	PART #
DIA LEN RANGE SHEAR TENSILE	#
1/8" .300 .126-.187 210 PSI 325 PSI	AD43BS
3/16" .425 .063-.250 445 PSI 490 PSI	AD62BS

DIA	LENGTH	APX QTY 1/8 LB	PART #
2117 HARD			
1/16"	3/16"	1582	MS20470AD2-3
3/32"	.125	513	MS20470AD3-2
5/32"	2"	29	MS20470AD5-32
3/32"	3/16"	435	MS20470AD3-3
3/32"	7/32"	407	MS20470AD3-3.5
3/32"	1/4"	378	MS20470AD3-4
3/32"	5/16"	359	MS20470AD3-5
3/32"	3/8"	299	MS20470AD3-6
3/32"	7/16"	271	MS20470AD3-7
3/32"	1/2"	228	MS20470AD3-8
3/32"	9/16"	268	MS20470AD3-9
3/32"	5/8"	209	MS20470AD3-10
3/32"	3/4"	250	MS20470AD3-12
3/32"	7/8"	183	MS20470AD3-14
3/32"	1"	162	MS20470AD3-16
1/8"	3/16"	216	MS20470AD4-3
1/8"	1/4"	191	MS20470AD4-4
1/8"	5/16"	173	MS20470AD4-5
1/8"	3/8"	154	MS20470AD4-6
1/8"	7/16"	141	MS20470AD4-7
1/8"	15/32"	135	MS20470AD4-7.5
1/8"	1/2"	129	MS20470AD4-8
1/8"	9/16"	120	MS20470AD4-9
1/8"	5/8"	104	MS20470AD4-10
1/8"	11/16"	121	MS20470AD4-11
1/8"	3/4"	113	MS20470AD4-12
1/8"	13/16"	106	MS20470AD4-13
1/8"	7/8"	99	MS20470AD4-14
1/8"	15/16"	94	MS20470AD4-15
1/8"	1"	88	MS20470AD4-16
1/8"	1-1/8"	79	MS20470AD4-18
1/8"	1-3/8"	66	MS20470AD4-22
1/8"	1-7/8"	50	MS20470AD4-30
5/32"	.125	214	MS20470AD5-2
5/32"	3/16"	177	MS20470AD5-3
5/32"	1/4"	111	MS20470AD5-4
5/32"	5/16"	100	MS20470AD5-5
5/32"	3/8"	100	MS20470AD5-6
5/32"	7/16"	84	MS20470AD5-7
5/32"	1/2"	102	MS20470AD5-8
5/32"	9/16"	72	MS20470AD5-9
5/32"	5/8"	63	MS20470AD5-10
5/32"	3/4"	50	MS20470AD5-12
5/32"	13/16"	55	MS20470AD5-13
5/32"	7/8"	61	MS20470AD5-14
5/32"	1"	70	MS20470AD5-16
5/32"	1-1/8"	49	MS20470AD5-18
5/32"	1-3/8"	40	MS20470AD5-22
5/32"	1-1/2"	38	MS20470AD5-24
5/32"	1-3/4"	36	MS20470AD5-28
3/16"	5/16"	77	MS20470AD6-5
3/16"	3/8"	59	MS20470AD6-6
3/16"	7/16"	54	MS20470AD6-7
3/16"	1/2"	50	MS20470AD6-8
3/16"	9/16"	47	MS20470AD6-9
3/16"	5/8"	41	MS20470AD6-10
3/16"	11/16"	51	MS20470AD6-11
3/16"	3/4"	47	MS20470AD6-12
3/16"	7/8"	42	MS20470AD6-14
3/16"	1"	33	MS20470AD6-16
3/16"	1-1/8"	34	MS20470AD6-18
3/16"	1-1/4"	31	MS20470AD6-20
3/16"	1-5/8"	24	MS20470AD6-26
3/16"	2"	16	MS20470AD6-32
1/4"	5/8"	27	MS20470AD8-10
1/4"	3/4"	24	MS20470AD8-12
1/4"	7/8"	21	MS20470AD8-14

FASTENERS & HARDWARE

AVEX RIVET

These rivets are available in dome head 1601 (1693) or countersunk head 1604 (1682), with steel stem and aluminum body. 1601 Series dome head aluminum rivet with zinc coated steel mandrel. 1604 series 120 deg countersunk aluminum rivet with zinc coated steel mandrels. 1/8" diameter has 165 lb shear, 230# tensile. 5/32" diameter has 255# shear, 375# tensile. 1601 and 1604 series stocked when 1693 and 1682 stock depleted.



DIAMETER	GRIP RANGE	SHEAR	TENSILE	PART #
DOME				
5/32"	.093-.250	165 PSI	230 PSI	AVEX1601-0512
1/8"	.031-.187	165 PSI	230 PSI	AVEX1601-0410
1/8"	.125-.312	165 PSI	230 PSI	AVEX1661-0414
COUNTERSUNK				
1/8"	.093-.250	165 PSI	230 PSI	AVEX1604-0412
5/32"	.109-.312	255 PSI	375 PSI	AVEX1604-0514

MONEL RIVET

Pop rivet manufactured by Pop. Rivet made of monel with a carbon steel mandrel and is completely zinc finished. 120 Degree countersunk open end rivet. 7/64" Diameter, Length .223, Grip .051-.090.



DESCRIPTION	PART #
MONEL RIVET 120 D COUNTERSUNK	MK319BS

OPEN BLIND RIVET

5052 aluminum rivet, dome head with aluminum mandrel - open end.



DIAMETER	LENGTH	GRIP RANGE	SHEAR	TENSILE	PART #
3/32"	.225	.032-.125	85 PSI	135 PSI	AD32ABS
1/8"	.188	.032-.062	155 PSI	235 PSI	AD41ABS
1/8"	.301	.063-.125	155 PSI	235 PSI	AD42ABS
1/8"	.313	.126-.187	155 PSI	235 PSI	AD43ABS
5/32"	.275	.063-.125	225 PSI	350 PSI	AD52ABS
5/32"	.338	.126-.187	225 PSI	360 PSI	AD53ABS

BLIND RIVET

Structural, self-plugging 5056 aluminum rivet with a 7178 aluminum mandrel.



DIAMETER	LENGTH	GRIP RANGE	PART #
PROTRUDING			
1/8"	.275	.063-.125	AAPQ-42
1/8"	.337	.126-.187	AAPQ-43
1/8"	.400	.188-.250	AAPQ-44
5/32"	.300	.062-.125	AAPQ-52
1/8"	.255	.025-.063	AD41H
1/8"	.316	.063-.125	AD42H
COUNTERSUNK			
1/8"	.337	.126-.187	AACQ-43
1/8"	.400	.188-.250	AACQ-44
1/8"	.525	.251-.375	AACQ-46
1/8"	.275	.063-.125	AAC-42
1/8"	.330	.063-.125	AK42H

CHERRY MAX RIVET

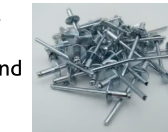
100 degree countersunk, oversize, flush head or oversize universal head steel 8740 mandrel with aluminum rivet. Structural - per Cherry.



DIAMETER	LENGTH	GRIP RANGE	PART #
100°			
.140	.062	.032-.062	CR3242-4-1
.140	.125	.062-.125	CR3242-4-2
.140	.187	.125-.187	CR3242-4-3
.140	1/4"	.187-.250	CR3242-4-4
.140	.312	.250-.312	CR3242-4-5
UNIVERSAL			
1/8"	.062	.032-.062	CR3243-4-1
1/8"	.125	.062-.125	CR3243-4-2
1/8"	.187	.125-.187	CR3243-4-3
1/8"	1/4"	.187-.250	CR3243-4-4
1/8"	.312	.250-.312	CR3243-4-5

POP RIVET FLANGE HEAD

Pop blind rivet, large flange head, open end. Rivet is C1006-1010 carbon steel and has a carbon steel break mandrel. Diameter 1/8", length .250, grip .063 - .125.



DESCRIPTION	PART #
POP RIVET FLANGE HEAD 1/8 DIA	SD42BSLF

OVERSIZED HEAD BLIND RIVET

3/8" dome head x 1/8" dia. for use on 1967 and later Champion/Bellanca aircraft. 156# shear, 235# tensile. Grip range .063 -.125. 5052 aluminum with aluminum mandrel. Sold in bags of 100.



DESCRIPTION	PART #
BAG OF 100	11-57

DOME HEAD RIVET

Large flange rivets may be used when a wider bearing surface is required. This head style is an excellent choice for soft materials where the increased flange diameter will protect the integrity of the application. Large .615 diameter dome head. Grip length is .251 " - .375"



DESCRIPTION	PART #
RIVET DOME HEAD 3/16 X .5	ABA-66L

FLUSH RIVETS SET

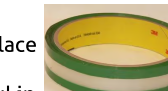
2 types available: cupped AN470 universal & flush style; both with a 1/2" body diameter and a .187" shank. Made from 4140 chromoly tool steel for long life.



DIAMETER	HEIGHT	PART #
CUPPED		
1/2"	.250	CSS125
1/2"	.250	CSS156
1/2"	.250	CSS188
FLUSH		
1/2"	.125	FSS125
1/2"	.188	FSS188
1/2"	.250	FSS250
1/2"	.313	FSS313
1/2"	.375	FSS375
1/2"	.438	FSS438
1/2"	.500	FSS500
1/2"	.563	FSS563
1/2"	.625	FSS625

RIVETER'S TAPE

Riveter's tape is specially designed to hold rivets in place prior to and during riveting operations; especially useful in speeding up large jobs. 3/16" rubber adhesive strips along both edges border a tack-free transparent center window that ensures easy visibility of rivets with no risk of adhesive transfer to rivet heads. Roll size: 3/4"x 36 yd.



DESCRIPTION	PART #
3/4" RIVETER'S TAPE	

STAINLESS STEEL RIVET

Open end blind rivet with stainless steel dome head and stainless steel mandrel.



DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.275	.063-.125	SSD42-SSBS
1/8"	.313	.126-.187	SSD43-SSBS
1/8"	.375	.188-.250	SSD44-SSBS
1/8"	.500	.313-.375	SSD46-SSBS
1/8"	.400	.188-.250	CSC-44

FASTENERS & HARDWARE

USM RIVET

Dome head plated carbon steel body with coated carbon steel mandrel.



DIAMETER	LENGTH	GRIP RANGE	PART #
1/8"	.275	.063-.125	SD42-BS
1/8"	3/8"	.188-.250	SD44-BS
1/8"	1/2"	.313-.375	SD46-BS
1/8"	5/8"	.376-.500	SD48-BS

82 DEG COUNTERSINK MACHINE SCREW

82 Degree countersunk 6-32 machine screw.



DESCRIPTION	PART #
MACHINE SCREW	MS51959-27

AN526C TRUSS HEAD STAINLESS SCREW

Stainless steel, phillips, truss head machine screw.



THREAD SIZE	LENGTH	PART #
6-32	3/8"	AN526C-6R6
6-32	1/2"	AN526C-6R8
6-32	5/8"	AN526C-6R10
6-32	3/4"	AN526C-6R12
8-32	3/8"	AN526C-8R6
8-32	1/2"	AN526C-8R8
8-32	5/8"	AN526C-8R10
8-32	3/4"	AN526C-8R12
8-32	1"	AN526C-8R16
10-32	3/8"	AN526C-10R6
10-32	1/2"	AN526C-10R8
10-32	5/8"	AN526C-10R10
10-32	3/4"	AN526C-10R12
10-32	1"	AN526C-10R16

AN526 TRUSS HEAD SCREW

Phillips head Carbon steel per QQ-S-671, Type FS1010, 55,000 ps minimum tensile strength (or other steel meeting the same physical requirements). Cadmium plate finish per QQ-P-416, Type 1, Class 3.



THREAD SIZE	LENGTH	PART #
6-32	1/4"	AN526-6R4
6-32	5/16"	AN526-6R5
6-32	3/8"	AN526-6R6
6-32	3/4"	AN526-6R7
6-32	1/2"	AN526-6R8
6-32	9/16"	AN526-6R9
6-32	5/8"	AN526-6R10
6-32	3/4"	AN526-6R12
6-32	7/8"	AN526-6R14
6-32	1"	AN526-6R16
6-32	1-1/8"	AN526-6R18
6-32	1-1/4"	AN526-6R20
6-32	1-1/2"	AN526-6R24
6-32	2"	AN526-6R32
8-32	1/4"	AN526-8R4
8-32	5/16"	AN526-8R5
8-32	3/8"	AN526-8R6
8-32	7/16"	AN526-8R7
8-32	1/2"	AN526-8R8
8-32	9/16"	AN526-8R9
8-32	5/8"	AN526-8R10
8-32	5/16"	AN526-8R12
8-32	7/8"	AN526-8R14
8-32	1"	AN526-8R16
8-32	1-1/4"	AN526-8R20
8-32	1-1/2"	AN526-8R24
8-32	2"	AN526-8R32
8-32	2-1/2"	AN526-8R40
10-32	1/4"	AN526-10R4
10-32	5/16"	AN526-10R5
10-32	3/8"	AN526-10R6
10-32	7/16"	AN526-10R7
10-32	1/2"	AN526-10R8
10-32	9/16"	AN526-10R9
10-32	5/8"	AN526-10R10
10-32	3/4"	AN526-10R12
10-32	7/8"	AN526-10R14
10-32	1"	AN526-10R16
10-32	1-1/8"	AN526-10R18
10-32	1-1/4"	AN526-10R20
10-32	1"	AN526-10R21
10-32	5/16"	AN526-10R22
10-32	1-3/8"	AN526-10R24
10-32	1-5/8"	AN526-10R26

MS24693BB FLAT HEAD CROSS RECESSED SCREW - BRASS

Brass screw, black oxide coated. Brass Spec QQ-W- 321 or QQ-B-626. Black oxide per MIL-F-495.



THREAD SIZE	LENGTH	PART #
4-40	5/16"	MS24693-BB3
4-40	3/8"	MS24693-BB4
4-40	7/16"	MS24693-BB5
4-40	1/2"	MS24693-BB6
4-40	5/8"	MS24693-BB7
4-40	7/8"	MS24693-BB9
4-40	1"	MS24693-BB10
6-32	1/4"	MS24693-BB24
6-32	3/8"	MS24693-BB26
6-32	7/16"	MS24693-BB27
6-32	1/2"	MS24693-BB28
6-32	5/8"	MS24693-BB29
6-32	3/4"	MS24693-BB30
6-32	7/8"	MS24693-BB31
6-32	1"	MS24693-BB32
6-32	1-1/8"	MS24693-BB33
6-32	1-1/4"	MS24693-BB34
6-32	1-1/2"	MS24693-BB36
6-32	2"	MS24693-BB40
8-32	3/8"	MS24693-BB48
8-32	1/2"	MS24693-BB50
8-32	5/8"	MS24693-BB51
8-32	3/4"	MS24693-BB52
8-32	1"	MS24693-BB54
8-32	1-1/4"	MS24693-BB56
8-32	1-1/2"	MS24693-BB58
8-32	2"	MS24693-BB62
10-32	1/2"	MS24693-BB272
10-32	5/8"	MS24693-BB273
10-32	3/4"	MS24693-BB274
10-32	7/8"	MS24693-BB275
10-32	1"	MS24693-BB276
10-32	1-1/4"	MS24693-BB278

MS24693C FLAT HEAD CROSS RECESSED SCREW - STAINLESS STEEL

100 degree flat head, stainless steel, 80,000 psi.



THREAD SIZE	LENGTH	PART #
6-32	3/8"	MS24693-C26
6-32	1/2"	MS24693-C28
6-32	5/8"	MS24693-C29
6-32	3/4"	MS24693-C30
8-32	3/8"	MS24693-C48
8-32	1/2"	MS24693-C50
8-32	5/8"	MS24693-C51
8-32	3/4"	MS24693-C52
10-32	3/8"	MS24693-C270
10-32	1/2"	MS24693-C272
10-32	5/8"	MS24693-C273
10-32	3/4"	MS24693-C274
10-32	1"	MS24693-C276
10-32	1-1/2"	MS24693-C280
10-32	1-3/4"	MS24693-C282

FASTENERS & HARDWARE

MS24693S FLAT HEAD CROSS RECESSED MACHINE SCREW

Set screws provide fast, permanent location of parts on shafts. The cup point edge digs into the contact surface for maximum holding power when under pressure. Length listed is overall length.



THREAD SIZE	LENGTH	PART #
4-40	1/4"	MS24693-S2
4-40	5/16"	MS24693-S3
4-40	3/8"	MS24693-S4
4-40	7/16"	MS24693-S5
4-40	1/2"	MS24693-S6
4-40	5/8"	MS24693-S7
4-40	3/4"	MS24693-S8
4-40	7/8"	MS24693-S9
4-40	1"	MS24693-S10
6-32	1/4"	MS24693-S24
6-32	5/16"	MS24693-S25
6-32	3/8"	MS24693-S26
6-32	7/16"	MS24693-S27
6-32	1/2"	MS24693-S28
6-32	5/8"	MS24693-S29
6-32	3/4"	MS24693-S30
6-32	7/8"	MS24693-S31
6-32	1"	MS24693-S32
6-32	1-1/8"	MS24693-S33
6-32	1-1/4"	MS24693-S34
6-32	1-1/2"	MS24693-S36
6-32	2"	MS24693-S40
8-32	1/4"	MS24693-S46
8-32	5/16"	MS24693-S47
8-32	3/8"	MS24693-S48
8-32	7/16"	MS24693-S49
8-32	1/2"	MS24693-S50
8-32	5/8"	MS24693-S51
8-32	3/4"	MS24693-S52
8-32	7/8"	MS24693-S53
8-32	1"	MS24693-S54
8-32	1-1/8"	MS24693-S55
8-32	1-1/4"	MS24693-S56
8-32	1-1/2"	MS24693-S58
8-32	1-3/4"	MS24693-S60
8-32	2"	MS24693-S62
8-32	2-1/2"	MS24693-S64
10-24	1/2"	MS24693-S72
10-24	3/4"	MS24693-S74
10-32	1/4"	MS24693-S268
10-32	5/16"	MS24693-S269
10-32	3/8"	MS24693-S270
10-32	7/16"	MS24693-S271
10-32	1/2"	MS24693-S272
10-32	5/8"	MS24693-S273
10-32	3/4"	MS24693-S274
10-32	7/8"	MS24693-S275
10-32	1"	MS24693-S276
10-32	1-1/8"	MS24693-S277
10-32	1-1/4"	MS24693-S278
10-32	1-3/8"	MS24693-S279
10-32	1-1/2"	MS24693-S280
10-32	1-5/8"	MS24693-S281
10-32	1-3/4"	MS24693-S282
1/4"-20	5/8"	MS24693-S295
1/4"-28	7/16"	MS24693-S293
1/4"-28	1/2"	MS24693-S294
1/4"-28	5/8"	MS24693-S295
1/4"-28	1"	MS24693-S298
1/4"-28	1 1/32"	MS24693-S103

MS24694S FLAT HEAD CROSS RECESSED MACHINE SCREW

Set screws provide fast, permanent location of parts on shafts. The cup point edge digs into the contact surface for maximum holding power when under pressure.



THREAD SIZE	LEN GRIP	LEN NOM	PART #
8-32	3/32"	9/32"	MS24694-S1
8-32	3/32"	11/32"	MS24694-S2
8-32	3/32"	13/32"	MS24694-S3
8-32	3/32"	15/32"	MS24694-S4
8-32	3/32"	17/32"	MS24694-S5
8-32	5/32"	19/32"	MS24694-S6
8-32	7/32"	21/32"	MS24694-S7
8-32	9/32"	9/32"	MS24694-S8
8-32	11/32"	25/32"	MS24694-S9
8-32	13/32"	27/32"	MS24694-S10
8-32	15/32"	29/32"	MS24694-S11
8-32	17/32"	31/32"	MS24694-S12
8-32	19/32"	1-1/32"	MS24694-S13
8-32	21/32"	1-3/32"	MS24694-S14
8-32	23/32"	1-5/32"	MS24694-S15
8-32	25/32"	1-7/32"	MS24694-S16
8-32	27/32"	1-9/32"	MS24694-S17
8-32	31/32"	1-13/32"	MS24694-S19
8-32	1-1/32"	1-15/32"	MS24694-S20
8-32	1-3/32"	1-17/32"	MS24694-S21
8-32	1-9/32"	1-23/32"	MS24694-S24
8-32	1-13/32"	1-27/32"	MS24694-S26
8-32	1-17/32"	1-29/32"	MS24694-S28
10-32	7/64"	9/32"	MS24694-S46
10-32	7/64"	11/32"	MS24694-S47
10-32	7/64"	13/32"	MS24694-S48
10-32	7/64"	15/32"	MS24694-S49
10-32	7/64"	17/32"	MS24694-S50
10-32	7/64"	19/32"	MS24694-S51
10-32	3/16"	21/32"	MS24694-S52
10-32	1/4"	23/32"	MS24694-S53
10-32	5/16"	25/32"	MS24694-S54
10-32	3/8"	27/32"	MS24694-S55
10-32	7/16"	29/32"	MS24694-S56
10-32	1/2"	31/32"	MS24694-S57
10-32	9/16"	1-1/32"	MS24694-S58
10-32	.625	1-3/32"	MS24694-S59
10-32	11/16"	1-5/32"	MS24694-S60
10-32	.750	1-7/32"	MS24694-S61

MS24694C MACHINE SCREW - STAINLESS STEEL

Phillips head stainless steel machine screw.



THREAD SIZE	LENGTH	PART #
8-32	15/32"	MS24694-C4
8-32	19/32"	MS24694-C6
8-32	21/32"	MS24694-C7
8-32	25/32"	MS24694-C9
10-32	11/32"	MS24694-C47
10-32	13/32"	MS24694-C48
10-32	17/32"	MS24694-C50
10-32	19/32"	MS24694-C51
10-32	21/32"	MS24694-C52
10-32	25/32"	MS24694-C54
10-32	29/32"	MS24694-C56
10-32	1-7/32"	MS24694-C61
10-32	1-13/32"	MS24694-C64
10-32	1-15/32"	MS24694-C65
1/4"-28	11/32"	MS24694-C92
1/4"-28	25/32"	MS24694-C99
1/4"-28	27/32"	MS24694-C100

THREAD SIZE	LEN GRIP	LEN NOM	PART #
10-32	.750	1-7/32"	MS24694-S62
10-32	7/8"	1-11/32"	MS24694-S63
10-32	15/16"	1-13/32"	MS24694-S64
10-32	1"	1-15/32"	MS24694-S65
10-32	1-1/16"	1-17/32"	MS24694-S66
10-32	1-3/16"	1-21/32"	MS24694-S68
10-32	1.250	1-23/32"	MS24694-S69
10-32	1-5/16"	1-25/32"	MS24694-S70
10-32	1-3/8"	1-27/32"	MS24694-S71
10-32	1-7/16"	1-29/32"	MS24694-S72
10-32	1-9/16"	2-1/32"	MS24694-S74
10-32	1-5/8"	2-3/32"	MS24694-S75
10-32	1-11/16"	2-5/32"	MS24694-S76
10-32	1-3/4"	2-7/32"	MS24694-S77
10-32	1-7/8"	2-11/32"	MS24694-S79
10-32	2-1/16"	2-17/32"	MS24694-S82
10-32	2-3/16"	2-21/32"	MS24694-S84
1/4"-28	9/64"	13/32"	MS24694-S93
1/4"-28	9/64"	15/32"	MS24694-S94
1/4"-28	9/64"	17/32"	MS24694-S95
1/4"-28	9/64"	19/32"	MS24694-S96
1/4"-28	9/64"	21/32"	MS24694-S97
1/4"-28	3/16"	23/32"	MS24694-S98
1/4"-28	1/4"	25/32"	MS24694-S99
1/4"-28	5/16"	27/32"	MS24694-S100
1/4"-28	3/8"	29/32"	MS24694-S101
1/4"-28	7/16"	31/32"	MS24694-S102
1/4"-28	9/16"	1-3/32"	MS24694-S104
1/4"-28	.625	1-5/32"	MS24694-S105
1/4"-28	11/16"	1-7/32"	MS24694-S106
1/4"-28	13/16"	1-11/32"	MS24694-S108
1/4"-28	7/8"	1-13/32"	MS24694-S109
1/4"-28	15/16"	1-15/32"	MS24694-S110
1/4"-28	1"	1-17/32"	MS24694-S111
1/4"-28	1-1/16"	1-19/32"	MS24694-S112
1/4"-28	1-1/8"	1-21/32"	MS24694-S113
1/4"-28	1-3/16"	1-23/32"	MS24694-S114
1/4"-28	1.250	1-25/32"	MS24694-S115
1/4"-28	1-1/2"	2-1/32"	MS24694-S119
1/4"-28	1-3/4"	2-9/32"	MS24694-S123
1/4"-28	1-7/8"	2-13/32"	MS24694-S125
3/8"-24	3/16"	29/32"	MS24694-S188
3/8"-24	7/32"	29/32"	MS24694-S189
3/8"-24	13/32"	1-3/32"	MS24694-S192

FASTENERS & HARDWARE

MS27039 PAN HEAD CROSS RECESSED SCREW

Low alloy steel per MIL-S-8695/MIL-S-6050, Rockwell hardness C26 to C32; 125,000 to 145,000 psi tensile strength. Cadmium plate finish per QQ-P-416, Type 2, Class 3. Supersedes NAS220 #8-32, NAS221 #10-32



THREAD SIZE	LEN GRIP	LEN NOM	PART #
8-32	1/32"	9/32"	MS27039-0804
8-32	1/32"	13/32"	MS27039-0806
8-32	1/32"	15/32"	MS27039-0807
8-32	3/32"	17/32"	MS27039-0808
8-32	3/32"	19/32"	MS27039-0809
8-32	7/32"	21/32"	MS27039-0810
8-32	9/32"	23/32"	MS27039-0811
8-32	11/32"	25/32"	MS27039-0812
8-32	15/32"	29/32"	MS27039-0814
8-32	19/32"	1-1/32"	MS27039-0816
8-32	23/32"	1-5/32"	MS27039-0818
8-32	27/32"	1-9/32"	MS27039-0820
10-32	1-3/32"	9/32"	MS27039-1-04
10-32	1/32"	11/32"	MS27039-1-05
10-32	1/32"	13/32"	MS27039-1-06
10-32	1/32"	15/32"	MS27039-1-07
10-32	1/16"	17/32"	MS27039-1-08
10-32	1/8"	19/32"	MS27039-1-09
10-32	3/16"	21/32"	MS27039-1-10
10-32	1/4"	23/32"	MS27039-1-11
10-32	5/16"	25/32"	MS27039-1-12
10-32	7/16"	29/32"	MS27039-1-14
10-32	1/2"	31/32"	MS27039-1-15
10-32	9/16"	1-1/32"	MS27039-1-16
10-32	1-1/16"	1-17/32"	MS27039-1-24

MS35190 FLAT HEAD CROSS RECESSED SCREW

82 degree carbon steel to Fed Std #66, AISI identification C1013, 55,000 psi minimum tensile strength. Cadmium plate finish to QQ-P-416, Type 2, Class 3.



THREAD SIZE	LENGTH	PART #
4-40	1/4"	MS35190-221
4-40	5/16"	MS35190-222
4-40	1/2"	MS35190-225
4-40	1"	MS35190-229
6-32	3/8"	MS35190-236
6-32	1/2"	MS35190-238
6-32	5/8"	MS35190-239
6-32	3/4"	MS35190-240
6-32	1-1/4"	MS35190-243
6-32	1-1/2"	MS35190-244
6-32	2"	MS35190-246
8-32	5/16"	MS35190-250
8-32	3/8"	MS35190-251
8-32	1/2"	MS35190-253
8-32	5/8"	MS35190-254
8-32	3/4"	MS35190-255
8-32	1"	MS35190-257
8-32	1-1/4"	MS35190-258
10-24	5/8"	MS35190-272

MS35206 ROUND HEAD CROSS RECESSED SCREW

Carbon steel Fed Std. #66, AISI identification #C1010, C1011, C1012 or C1013; 60,000 psi minimum tensile strength. Cadmium plated finish per Spec. QQ-P-416 Type 2, Class 3. Can be used as a replacement AN526. Old AN 515 number.



THREAD SIZE	LENGTH	PART #
2-56	1/4"	MS35206-203
2-56	3/8"	MS35206-205
2-56	1/2"	MS35206-207
2-56	5/8"	MS35206-208
2-56	3/4"	MS35206-209
4-40	3/16"	MS35206-212
4-40	1/4"	MS35206-213
4-40	5/16"	MS35206-214
4-40	3/8"	MS35206-215
4-40	7/16"	MS35206-216
4-40	1/2"	MS35206-217
4-40	5/8"	MS35206-218
4-40	3/4"	MS35206-219
4-40	7/8"	MS35206-220
4-40	1"	MS35206-221
4-40	1-1/4"	MS35206-222
4-40	1-1/2"	MS35206-223
6-32	1/4"	MS35206-226
6-32	5/16"	MS35206-227
6-32	3/8"	MS35206-228
6-32	7/16"	MS35206-229
6-32	1/2"	MS35206-230
6-32	5/8"	MS35206-231
6-32	3/4"	MS35206-232
6-32	7/8"	MS35206-233
6-32	1"	MS35206-234
6-32	1-1/4"	MS35206-235
6-32	1-1/2"	MS35206-236
6-32	2"	MS35206-238
8-32	5/16"	MS35206-242
8-32	3/8"	MS35206-243
8-32	7/16"	MS35206-244
8-32	1/2"	MS35206-245
8-32	5/8"	MS35206-246
8-32	3/4"	MS35206-247
8-32	7/8"	MS35206-248
8-32	1"	MS35206-249
8-32	1-1/4"	MS35206-250
8-32	1-1/2"	MS35206-251
8-32	1-3/4"	MS35206-252
8-32	2"	MS35206-253
8-32	2-1/4"	MS35206-254
8-32	2-1/2"	MS35206-255
8-32	2-3/4"	MS35206-256
8-32	3/8"	MS35206-261
8-32	7/16"	MS35206-262
8-32	1/2"	MS35206-263
10-24	5/8"	MS35206-264
10-24	3/4"	MS35206-265
10-24	7/8"	MS35206-266
10-24	1"	MS35206-267
10-24	1-1/4"	MS35206-268
10-24	1-1/2"	MS35206-269
10-24	1-1/8"	MS35206-332
10-24	1-3/8"	MS35206-333
10-24	1-7/8"	MS35206-334

MS35191 FLAT HEAD CROSS RECESSED SCREW

82 degree countersunk, carbon steel, cadmium plated UNF-2A (old AN510).



THREAD SIZE	LENGTH	PART #
10-32	3/4"	MS35191-274

MS35207 PAN HEAD CROSS RECESSED SCREW

Carbon steel to Fed. Std #66, AISI identification #C1010, C1012 or C1013; 55,000 psi minimum tensile strength. Cadmium plated finish per Spec QQ-P-461 Type 2, Class 3. Old AN520.



THREAD SIZE	LENGTH	PART #
8-36	3/8"	MS35207-243
8-36	5/8"	MS35207-246
10-32	1/4"	MS35207-259
10-32	5/16"	MS35207-260
10-32	3/8"	MS35207-261
10-32	7/16"	MS35207-262
10-32	1/2"	MS35207-263
10-32	5/8"	MS35207-264
10-32	3/4"	MS35207-265
10-32	7/8"	MS35207-266
10-32	1"	MS35207-267
10-32	1-1/4"	MS35207-268
10-32	1-1/2"	MS35207-269
10-32	1-3/4"	MS35207-270
10-32	2"	MS35207-271
1/4"-28	2-1/4"	MS35207-288

MS35215 BRASS PAN HEAD CROSS RECESSED SCREW

Brass per spec. QQ-B-613,626 or QQ-W-321; 55,000 psi minimum tensile strength. Black oxide coated per Spec. MIL-F-495. UNF-2A. Old AN520 number.



THREAD SIZE	LENGTH	PART #
10-32	3/8"	MS35215-53
10-32	1/2"	MS35215-55
10-32	5/8"	MS35215-56
10-32	3/4"	MS35215-57
10-32	1"	MS35215-59
10-32	1-1/4"	MS35215-60
10-32	1-1/2"	MS35215-61

FASTENERS & HARDWARE

MS35214 BRASS PAN HEAD CROSS RECESSED SCREW

Brass per spec. QQ-B-613,626 or QQ-W-321; 55,000 psi minimum tensile strength. Black oxide coated per Spec. MIL-F-495. 4-40 for use with instruments. Replacement for AN515B.



THREAD SIZE	LENGTH	PART #
4-40	3/8"	MS35214-14
4-40	1/2"	MS35214-16
4-40	5/8"	MS35214-17
4-40	3/4"	MS35214-18
6-32	1/4"	MS35214-23
6-32	5/16"	MS35214-24
6-32	3/8"	MS35214-25
6-32	7/16"	MS35214-26
6-32	1/2"	MS35214-27
6-32	5/8"	MS35214-28
6-32	3/4"	MS35214-29
6-32	7/8"	MS35214-30
6-32	1"	MS35214-31
6-32	1-1/4"	MS35214-32
6-32	1-1/2"	MS35214-33
8-32	3/8"	MS35214-40
8-32	1/2"	MS35214-42
8-32	5/8"	MS35214-43
8-32	3/4"	MS35214-44
8-32	7/8"	MS35214-45
8-32	1"	MS35214-46
8-32	1-1/4"	MS35214-47
8-32	1-1/2"	MS35214-48

AN525R CROSS RECESSED SCREW

Steel per AN-QQ-S-689; tensile strength 125,000 psi minimum. Cadmium plate finish per AN-P-61.



THREAD	LENGTH	PART #
8-32	1/4"	AN525-8R4
8-32	5/16"	AN525-8R5
8-32	3/8"	AN525-8R6
8-32	7/16"	AN525-8R7
8-32	1/2"	AN525-8R8
8-32	9/16"	AN525-8R9
8-32	5/8"	AN525-8R10
8-32	3/4"	AN525-8R12
8-32	7/8"	AN525-8R14
8-32	1"	AN525-8R16
8-32	1-1/8"	AN525-8R18
8-32	1-1/4"	AN525-8R20
8-32	1-3/8"	AN525-8R22
8-32	1-1/2"	AN525-8R24
10-32	5/16"	AN525-10R5
10-32	3/8"	AN525-10R6
10-32	7/16"	AN525-10R7
10-32	1/2"	AN525-10R8
10-32	9/16"	AN525-10R9
10-32	5/8"	AN525-10R10
10-32	3/4"	AN525-10R12
10-32	7/8"	AN525-10R14
10-32	1"	AN525-10R16
10-32	1-1/8"	AN525-10R18
10-32	1-1/4"	AN525-10R20
10-32	1-3/8"	AN525-10R22
10-32	1-1/2"	AN525-10R24
10-32	1-5/8"	AN525-10R26
10-32	1-7/8"	AN525-10R30
1/4-28	5/8"	AN525-416R10
1/4-28	3/4"	AN525-416R12
1/4-28	7/8"	AN525-416R14

PAN HEAD SCREW

Round head pan head machine screw.



THREAD	LENGTH	PART #
8-32	1-1/2"	AN515-8R24
10-32	5/8"	AN520-10R10

AN525 SLOTTED WASHER HEAD STEEL SCREW

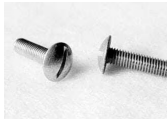
Steel per AN-QQ-S-689; tensile strength 125,000 psi minimum. Cadmium plate finish per AN-P-61 (or zinc plate per AN-P-32).



THREAD	LENGTH	PART #
10-32	1/2"	AN525-10-8
10-32	1/2"	AN525-10-10

AN526 SLOTTED STEEL SCREW

Steel per AN-QQ-S-689; tensile strength 125,000 psi minimum. Cadmium plate finish per AN-P-61 (or zinc plate per AN-P-32).



THREAD	LENGTH	PART #
6-32	3/4"	AN526-6-12
6-32	1"	AN526-6-16
6-32	1-1/8"	AN526-6-18
6-32	1-1/4"	AN526-6-20
6-32	1-3/8"	AN526-6-22
6-32	1-1/2"	AN526-6-24
6-32	1-5/8"	AN526-6-26
6-32	1-3/4"	AN526-6-28
6-32	2"	AN526-6-32
8-32	1/4"	AN526-8-4
8-32	3/4"	AN526-8-12
8-32	7/8"	AN526-8-14
8-32	1"	AN526-8-16
8-32	1-1/2"	AN526-8-24
8-32	2"	AN526-8-32
10-32	3/8"	AN526-10-6
10-32	5/8"	AN526-10-10
10-32	7/8"	AN526-10-14
10-32	1-5/8"	AN526-10-26
10-32	1-3/4"	AN526-10-28
10-32	2"	AN526-10-32
10-32	2-1/2"	AN526-10-40

AN526C SLOTTED TRUSS HEAD STAINLESS STEEL SCREW

Stainless steel, slotted machine screw.



THREAD	LENGTH	PART #
6-32	1/2"	AN526C-6-8
10-32	5/8"	AN526C-10-16

MS35265 FILLISTER HEAD STEEL SCREW

Slotted, coarse thread, drilled fillister head screw. Carbon steel to Procurement spec FF-S-91, 55,000 psi minimum tensile strength. Cadmium plate finish to Spec QQ-P-416, Type 2, Class 3.



THREAD SIZE	LENGTH	PART #
4-40	1/4"	MS35265-13
4-40	5/16"	MS35265-14
4-40	3/8"	MS35265-15
4-40	7/16"	MS35265-16
4-40	1/2"	MS35265-17
4-40	5/8"	MS35265-18
4-40	3/4"	MS35265-19
6-32	1/4"	MS35265-26
6-32	5/16"	MS35265-27
6-32	3/8"	MS35265-28
6-32	1/2"	MS35265-30
6-32	3/4"	MS35265-32
6-32	1"	MS35265-34
8-32	1/4"	MS35265-41
8-32	5/16"	MS35265-42
8-32	3/8"	MS35265-43
8-32	7/16"	MS35265-44
8-32	1/2"	MS35265-45
8-32	5/8"	MS35265-46
8-32	3/4"	MS35265-47
8-32	7/8"	MS35265-48
8-32	1"	MS35265-49
10-24	1/4"	MS35265-59
10-24	5/16"	MS35265-60
10-24	3/8"	MS35265-61
10-24	1/2"	MS35265-63
10-24	5/8"	MS35265-64
10-24	3/4"	MS35265-65
10-24	7/8"	MS35265-66
10-24	1"	MS35265-67
1/4"-20	1/2"	MS35265-79
1/4"-20	5/8"	MS35265-80
1/4"-20	3/4"	MS35265-81
1/4"-20	1"	MS35265-83
1/4"-20	1-1/4"	MS35265-84

MS35266 FILLISTER HEAD STEEL SCREW

Slotted, fine thread, drilled fillister head screw. Carbon steel to Procurement spec FF-S-91, 55,000 psi minimum tensile strength. Cadmium plate finish to Spec QQ-P-416, Type 2, Class 3.



THREAD SIZE	LENGTH	PART #
6-40	5/8"	MS35266-31
10-32	5/16"	MS35266-60
10-32	3/8"	MS35266-61
10-32	7/16"	MS35266-62
10-32	1/2"	MS35266-63
10-32	5/8"	MS35266-64
10-32	3/4"	MS35266-65
10-32	7/8"	MS35266-66
10-32	1"	MS35266-67
10-32	1-1/4"	MS35266-68
1/4"-28	7/16"	MS35266-78
1/4"-28	1/2"	MS35266-79
1/4"-28	5/8"	MS35266-80
1/4"-28	3/4"	MS35266-81
1/4"-28	2"	MS35266-87

FASTENERS & HARDWARE

SET SCREW

Set screws provide fast, permanent location of parts on shafts. The cup point edge digs into the contact surface for maximum holding power when under pressure. Length listed is overall length.



THREAD SIZE	LENGTH	PART #
8-32	3/16"	SS832X1/4
8-32	1/4"	SS832X1/16
10-32	1/4"	SS1032X1/4
1/4"-28	5/16"	SS1/4-28X5/16

SOCKET AIRCRAFT SCREW

Alloy steel for maximum tensiles up to 190,000 psi.



THREAD SIZE	LENGTH	PART #
1/4"-20	3/4"	CS1/4X20X3/4
1/4"-20	1"	CS1/4X20X1
1/4"-20	1-1/4"	CS1/4X20X1-1/4
1/4"-20	1-1/2"	CS1/4X20X1-1/2
1/4"-20	2"	CS1/4X20X2

VALVE COVER AIRCRAFT SCREW

Valve cover screw, stainless, phillips pan head with a captive washer.



THREAD SIZE	LENGTH	PART #
1/4"-20	5/8"	STD-1925PPS

FLAT HEAD BLUNT END STAINLESS STEEL SCREW

Sheet metal screws, phillips, 100 degree flat head type blunt end. Made of corrosion resistant steel, type. Sold in packs of 25.



THREAD SIZE	LENGTH	PART #
6-32	1/2"	MS21207C6-8
8-32	1/2"	MS21207C8-8
8-32	5/8"	MS21207C8-10
10-32	1/2"	MS21207C10-8

FLAT HEAD BLUNT END STEEL SCREW

82 degree. Blunt end, coarse thread, pitched finer than Type A. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4RX3/8-FHB
4	1/2"	4RX1/2-FHB
6	3/8"	6RX3/8-FHB
6	1/2"	6RX1/2-FHB
6	5/8"	6RX5/8-FHB
6	3/4"	6RX3/4-FHB
8	3/8"	8RX3/8-FHB
8	1/2"	8RX1/2-FHB
8	5/8"	8RX5/8-FHB
8	3/4"	8RX3/4-FHB
8	1"	8RX1-FHB
10	1/2"	10RX1/2-FHB
10	3/4"	10RX3/4-FHB

FLAT HEAD BLUNT END STEEL SCREW NAS 548

100 degree. Phillips flat head, Type B – blunt end. Sold in packs of 25.



SIZE	LENGTH	PART #
4	1/4"	NAS548P4-4
4	1/2"	NAS548P4-8
6	3/8"	NAS548P6-6
6	1/2"	NAS548P6-8
6	5/8"	NAS548P6-10
6	3/4"	NAS548P6-12
8	3/8"	NAS548P8-6
8	1/2"	NAS548P8-8
8	5/8"	NAS548P8-10
8	3/4"	NAS548P8-12
10	3/8"	NAS548P10-6
10	1/2"	NAS548P10-8
10	3/4"	NAS548P10-12

FLAT HEAD POINTED END STAINLESS STEEL SCREW

Stainless steel 82 degree sheet metal screws, phillips recessed flat head with pointed end. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4RX3/8-FHA-SS
4	1/2"	4RX1/2-FHA-SS
6	1/2"	6RX1/2-FHA-SS
6	3/4"	6RX3/4-FHA-SS
8	3/8"	8RX3/8-FHA-SS
8	1/2"	8RX1/2-FHA-SS
8	3/4"	8RX3/4-FHA-SS
8	1"	8RX1-FHA-SS
10	1/2"	10RX1/2-FHA-SS
10	3/4"	10RX3/4-FHA-SS

FLAT HEAD POINTED END STEEL SCREW

82 degree flat, phillips head, pointed end, coarse thread, with gimlet point. For use on sheet metal, plywood and asbestos. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4RX3/8-FHA
4	1/2"	4RX1/2-FHA
6	1/2"	6RX1/2-FHA
6	5/8"	6RX5/8-FHA
6	3/4"	6RX3/4-FHA
8	3/8"	8RX3/8-FHA
8	1/2"	8RX1/2-FHA
8	5/8"	8RX5/8-FHA
8	3/4"	8RX3/4-FHA
10	1/2"	10RX1/2-FHA
10	3/4"	10RX3/4-FHA
10	1"	10RX1-FHA

PHILLIPS TRUSS HEAD BLUNT END STAINLESS STEEL SCREW

Stainless THB – blunt pointed, coarse threaded pitched finer than type A. Sold in packs of 25.



SIZE	LENGTH	PART #
8	1/2"	8RX1/2-THB-SS
10	1/2"	10RX1/2-THB-SS

PHILLIPS TRUSS HEAD POINTED END STEEL SCREW

Stainless THB – blunt pointed, coarse threaded pitched finer than type A. Sold in packs of 25.

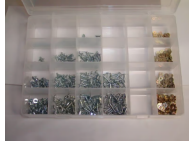


SIZE	LENGTH	PART #
4	1/4"	4RX1/4-THA
4	3/8"	4RX3/8-THA
4	1/2"	4RX1/2-THA
4	5/8"	4RX5/8-THA
4	3/4"	4RX3/4-THA
6	1/4"	6RX1/4-THA
6	3/8"	6RX3/8-THA
6	1/2"	6RX1/2-THA
6	5/8"	6RX5/8-THA
6	3/4"	6RX3/4-THA
6	1"	6RX1-THA
8	3/8"	8RX3/8-THA
8	1/2"	8RX1/2-THA
8	5/8"	8RX5/8-THA
8	3/4"	8RX3/4-THA
8	1"	8RX1-THA
8	1-1/4"	8RX1-1/4-THA
10	3/8"	10RX3/8-THA
10	1/2"	10RX1/2-THA
10	5/8"	10RX5/8-THA
10	1"	10RX1-THA
10	3/4"	10RX3/4-THA

FASTENERS & HARDWARE

SHEET METAL SCREW KIT

Kit contains: 25 each THA screws: 4Rx1/4", 3/8", 1/2" THA, 6R x3/8", 1/2", 5/8", THA 8Rx 3/8", 5/8", 3/4", 10R x 1/2", 5/8", 3/4" 100 washers, AN960-4, 6, 8, 10. One large plastic box.



DESCRIPTION	PART #
SCREW KIT	THA-KIT

STAINLESS STEEL SHEET METAL SCREW KIT

Kit contains: 25 each stainless screws: 4Rx1/4", 3/8", 1/2" THASS, 6R x3/8", 1/2", 5/8", THASS, 8Rx 3/8", 1/2", 5/8", 3/4" THASS, 10R x 1/2", 5/8", 3/4" THASS, 100 stainless washers, AN960C-4, 6, 8, 10. One large plastic box.



DESCRIPTION	PART #
STAINLESS STEEL SCREW KIT	THA-SS-KIT

TRUSS HEAD BLUNT END STEEL SCREW

Blunt -pointed, coarse threaded, pitched finer than Type A. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4RX3/8-THB
6	3/8"	6RX3/8-THB
6	1/2"	6RX1/2-THB
6	5/8"	6RX5/8-THB
6	3/4"	6RX3/4-THB
8	3/8"	8RX3/8-THB
8	1/2"	8RX1/2-THB
8	5/8"	8RX5/8-THB
8	3/4"	8RX3/4-THB
8	1"	8RX1-THB
10	1/2"	10RX1/2-THB
10	3/4"	10RX3/4-THB

SLOTTED TRUSS HEAD STEEL - SHEET METAL

TRUSS HEAD SLOTTED, POINTED Coarse thread, with gimlet point. For use on sheet metal, plywood and asbestos.



SIZE	LENGTH	PART #
#4	1/2"	4X1/2-THA
#4	1/4"	4X1/4-THA
#6	3/4"	6X3/4-THA
#6	3/8"	6X3/8-THA
#6	5/8"	6X5/8-THA
#8	1/2"	8X1/2-THA
#8	3/4"	8X3/4-THA
#8	5/8"	8X5/8-THA

TRUSS HEAD POINTED END STAINLESS STEEL SCREW

Phillips recessed, truss head, Type A, pointed end. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4RX3/8-THA-SS
4	1/4"	4RX1/4-THA-SS
4	1/2"	4RX1/2-THA-SS
6	3/8"	6RX3/8-THA-SS
6	1/2"	6RX1/2-THA-SS
6	5/8"	6RX5/8-THA-SS
6	3/4"	6RX3/4-THA-SS
8	3/8"	8RX3/8-THA-SS
8	1/2"	8RX1/2-THA-SS
8	5/8"	8RX5/8-THA-SS
8	3/4"	8RX3/4-THA-SS
10	3/8"	10RX3/8-THA-SS
10	1/2"	10RX1/2-THA-SS
10	5/8"	10RX5/8-THA-SS
10	3/4"	10RX3/4-THA-SS

SHEET METAL SLOTTED BLUNT HEAD STAINLESS STEEL SCREW

Stainless Steel Slotted Flat Blunt Screw. Sold in packs of 25.



SIZE	LENGTH	PART #
832	1/2"	8X1/2-FHB-SS

SHEET METAL SLOTTED FLAT HEAD STEEL SCREW

Coarse thread with gimlet point. For use on sheet metal, plywood and asbestos. Sold in packs of 25.



SIZE	LENGTH	PART #
4	3/8"	4X3/8-FHA
4	5/8"	4X5/8-FHA
4	3/4"	4X3/4-FHA
6	1/2"	6X1/2-FHA
6	5/8"	6X5/8-FHA
6	3/8"	6X3/8-FHA
6	3/4"	6X3/4-FHA
8	3/8"	8X3/8-FHA
8	5/8"	8X5/8-FHA
8	3/4"	8X3/4-FHA
8	1"	8X1-FHA

WASHER KIT

Kit includes: 100 each AN960-6 through 616, and 15 each AN970-3 through 6.



DESCRIPTION	PART #
WASHER KIT	WP100

AN900 COPPER CRUSH WASHER

Copper crush washers size -5 to -30. Order by part number.



I.D.	O.D.	MS EQUIV NUMBER	PART #
5/16"	9/16"	MS35769-5	AN900-5
3/8"	.625	MS35769-6	AN900-6
7/16"	11/16"	MS35769-8	AN900-7
1/2"	.750	MS35769-9	AN900-8
9/16"	13/16"	MS35769-10	AN900-9
5/8"	7/8"	MS35769-11	AN900-10
11/16"	15/16"	MS35769-13	AN900-11
3/4"	1"	MS35759-15	AN900-12
13/16"	1-1/16"	MS35759-17	AN900-13
7/8"	1-1/8"	MS35759-18	AN900-14
15/16"	1-3/16"	MS35769-20	AN900-15
1"	1-1/4"	MS35769-21	AN900-16
1-1/16"	1-5/16"	MS35769-24	AN900-17
1-1/8"	1-3/8"	MS35769-26	AN900-18
1-3/16"	1-7/16"	MS35769-29	AN900-19
1-1/4"	1-1/2"	MS35769-31	AN900-20
1-3/8"	1-5/8"	MS35769-35	AN900-22
1-1/2"	1-3/4"	MS35769-39	AN900-24
1-5/8"	1-7/8"	MS35769-42	AN900-26
1-11/16"	1-15/16"	MS35769-46	AN900-27
1-3/4"	2"	MS35769-48	AN900-28
1-13/16"	2-1/16"	MS35769-51	AN900-29
1-7/8"	2-1/8"	MS35769-52	AN900-30

601 FINISHING WASHER - 82°

82° (MS27129 and NAS391) No. 601 countersunk type washers are made of nickelplated brass. Price is per package of 25.



SCREW SIZE	PART #
4	601-4
6	601-6
8	601-8
10	601-10

603 FINISHING WASHER - 100°

100° (MS27129 and NAS390) No. 603 flush type washers are made of nickel-plated brass. Price is per package of 25.



SCREW SIZE	I.D.	PART #
6	.150-.180	603-6
8	.196-.226	603-8
10	.193-.223	603-10

FASTENERS & HARDWARE

AN960 WASHER

Regular and light series in steel, stainless steel and aluminum flat washers. Steel is cad 11 plated. -3, -4, -6, -8 are screw sizes and very small. AN3 bolts start with -10, AN4 bolts -416 etc. Price is per package of 25.



BOLT OR SCREW SIZE	BOLT OR SCREW NUMBER	I.D. INCHES	O.D. INCHES	THICKNESS	SERIES	CAD PLATED PART #	STAINLESS STEEL PART #	ALUM THICKNESS	ALUMINUM PART #
#3		.105	.250	.032	STANDARD	AN960-3	AN960C-3	.032	AN960PD-3
#4	440	1/8"	.312	.032	STANDARD	AN960-4	AN960C-4	.032	AN960PD-4
#6	632	.149	3/8"	.032	STANDARD	AN960-6	AN960C-6	.032	AN960PD-6
#8	832	.174	3/8"	.032	STANDARD	AN960-8	AN960C-8	.032	AN960PD-8
#10	AN3	.203	.438	.063	STANDARD	AN960-10	AN960C-10	.063	AN960PD-10
1/4"	AN4	.265	1/2"	.063	STANDARD	AN960-416	AN960C-416	.063	AN960PD-416
5/16"	AN5	.328	.562	.063	STANDARD	AN960-516	AN960C-516	.063	AN960PD-516
3/8"	AN6	.390	.625	.063	STANDARD	AN960-616	AN960C-616	.063	AN960PD-616
7/16"	AN7	.453	.750	.063	STANDARD	AN960-716	AN960C-716	.063	AN960PD-716
1/2"	AN8	.515	7/8"	.063	STANDARD	AN960-816	AN960C-816	.063	AN960PD-816
9/16"	AN9	.578	1.062	.063	STANDARD	AN960-916	AN960C-916	.063	AN960PD-916
5/8"	AN10	.640	1.188	.063	STANDARD	AN960-1016	AN960C-1016		
3/4"	AN12	.765	1.312	.090	STANDARD	AN960-1216	AN960C-1216		
#3		.105	.250	.016	LIGHT	AN960-3L	AN960C-3L		
#4	440	1/8"	.312	.016	LIGHT	AN960-4L	AN960C-4L	.016	AN960PD-4L
#6	632	.149	3/8"	.016	LIGHT	AN960-6L	AN960C-6L	.016	AN960PD-6L
#8	832	.174	3/8"	.016	LIGHT	AN960-8L	AN960C-8L	.016	AN960PD-8L
#10	AN3	.203	.438	.032	LIGHT	AN960-10L	AN960C-10L	.016	AN960PD-10L
1/4"	AN4	.265	1/2"	.032	LIGHT	AN960-416L	AN960C-416L	.016	AN960PD-416L
5/16"	AN5	.328	.562	.032	LIGHT	AN960-516L	AN960C-516L	.016	AN960PD-516L
3/8"	AN6	.390	.625	.032	LIGHT	AN960-616L	AN960C-616L	.016	AN960PD-616L
7/16"	AN7	.453	.750	.032	LIGHT	AN960-716L	AN960C-716L	.016	AN960PD-716L
1/2"	AN8	.515	7/8"	.032	LIGHT	AN960-816L	AN960C-816L	.016	AN960PD-816L
9/16"	AN9	.578	1.062	.032	LIGHT	AN960-916L	AN960C-916L		
5/8"	AN10	.640	1.188	.032	LIGHT	AN960-1016L	AN960C-1016L		
3/4"	AN12	.765	1.312	.032	LIGHT	AN960-1216L			

AN970 FLAT WASHER

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



BOLT NUMBER	BOLT SIZE	I.D. INCHES	O.D. INCHES	THICKNESS	PART #
AN3	3/16"	.203	7/8"	.063	AN970-3
AN4	1/4"	.265	1.125	.063	AN970-4
AN5	5/16"	.328	1-3/8"	.063	AN970-5
AN6	3/8"	.390	1-5/8"	.063	AN970-6
AN7	7/16"	.453	1.812	.109	AN970-7
AN8	1/2"	.515	2"	.109	AN970-8
AN9	9/16"	.578	2.188	1/8"	AN970-9
AN10	5/8"	.640	2.375	1/8"	AN970-10

STAINLESS STEEL FINISHING WASHER

A series stainless steel washers for use with stainless steel 100 degree screws (MS24693C) to provide reinforced, low-profile attachments. Flat & tinnermann washers for use with sheet metal screws. Sold in packaged of 25 ea.



SCREW SIZE	THICKNESS	PART #
6-32	.012	A3236-6
8-32	.017	A3135-8
10-32	.020	A3235-10

SPRING STEEL FINISHING WASHER

Spring steel washers for use with 100° flat head screws to provide reinforced, low-profile attachments.



HOLE DIA	O.D.	SCREW SIZE	THICKNESS	PART #
.140-.147	1/2"	6-32	.012	A3236-012-24A
.170	.562	8-32	.017	A3135-017-24A
.255-.260	.812	8-32	.028	A3475-028-24A
.196	.750	10-32	.020	A3235-020-24A
.196	.750	10-32	.028	A3235-028-24A

NYLON WASHERS

As used in aircraft kits. Price is per package of 25.



SCREW SIZE	THICKNESS	PART #
#6	.031	NW-6
#8	.031	NW-8
#10	.031	NW-10

FASTENERS & HARDWARE

EXTERNAL TOOTH LOCK WASHER

Cadmium plated steel external tooth lock washer provides efficient locking action by spring tension and biting action of tapered twisted teeth. Made of 1050 spring steel and cad plated per specification QQ-P-416A, type II, Class 3. Sold in packages of 25 only.



BOLT NUMBER	SIZE	PART #
STEEL		
440	#4	MS35335-29
632	#6	MS35335-30
832	#8	MS35335-31
AN3	#10	MS35335-32
AN4	1/4"	MS35335-33
AN5	5/16"	MS35335-34
AN6	3/8"	MS35335-35
AN7	7/16"	MS35335-36
AN8	1/2"	MS35335-37
STAINLESS		
632	#6	MS35335-58
832	#8	MS35335-59
AN3	#10	MS35335-60
AN6	3/8"	MS35335-63

INTERNAL TOOTH LOCK WASHER

Cadmium plated steel internal tooth lock washer proved 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. (Old number AN936-A) Sold in packages of 25 only.



BOLT NUMBER	SIZE	PART #
STEEL		
440	#4	MS35333-36
632	#6	MS35333-37
832	#8	MS35333-38
AN3	#10	MS35333-39
AN4	1/4"	MS35333-40
AN5	5/16"	MS35333-41
AN6	3/8"	MS35333-42
AN7	7/16"	MS35333-43
AN8	1/2"	MS35333-44
AN9	9/16"	MS35333-45
STAINLESS		
632	#6	MS35335-58
832	#8	MS35335-59
AN3	#10	MS35335-60
AN4	1/4"	MS35333-74
AN5	5/16"	MS35333-75

LOCKING WASHER

Coarse thread with gimlet point. For use on sheet metal, plywood and asbestos. Sold in packs of 25.



SIZE	PART #
3/8"-24	NAS513-6

SPLIT LOCK WASHER

Split helical lock washers are made of carbon steel, cadmium plated per QQ-P-416A, type II class 3. (Old number AN935). Sold in packages of 25 only.



BOLT NUMBER	SIZE	PART #
STEEL		
632	#6	MS35338-41
832	#8	MS35338-42
1032	#10	MS35338-43
AN4	1/4"	MS35338-44
AN5	5/16"	MS35338-45
AN6	3/8"	MS35338-46
AN7	7/16"	MS35338-47
AN8	1/2"	MS35338-48
STAINLESS		
440	#4	MS35338-135
632	#6	MS35338-136
832	#8	MS35338-137
1032	#10	MS35338-138
AN4	1/4"	MS35338-139
AN5	5/16"	MS35338-140
AN6	3/8"	MS35338-141
AN7	7/16"	MS35338-142
AN8	1/2"	MS35338-143

SMALL COTTER PIN KIT

Small cotter pin kit contains 25 each cotter pins MS24665-134, MS24665-136, MS24665-285, MS24665-353 individually bagged.



DESCRIPTION	PART #
SMALL KIT	CP100-SMALL

COTTER PIN KIT

Kit contains 100 each: MS24665- 134 (1/16" diameter x 3/4" length) MS24665-136 (1/16" diameter x 1" length) MS24665-285 (3/32" diameter x 1" length) MS24665-353 (1/8" diameter x 1" length).



DESCRIPTION	PART #
LARGE KIT	CP100

COWLING LOCK PIN

Used with AN226 cowl fastener where the pin passes through on stud only. Made of corrosion-resisting steel wire.



LENGTH	WIRE SIZE	PART #
1-15/16"	80	AN415-2

COWLING SAFETY PIN

Positive locking pin that can be used without tool. Made of stainless spring steel.



UNDER SIDE	OVERALL LENGTH	PIN DIA	PART #
1-1/16"	1-3/8"	.051	AN416-1
3/4"	15/16"	.041	AN416-2

MS20392 CLEVIS PIN

Made of steel per Mil-SP5673, cadmium plated per QQ-P-416. Drilled hole for cotter pin. Order by MS number.



DIA	LENGTH	OLD AN NUMBER	PART #
1/8"	7/32"	AN392-7	MS20392-1C7
1/8"	9/32"	AN392-9	MS20392-1C9
1/8"	11/32"	AN392-11	MS20392-1C11
1/8"	13/32"	AN392-13	MS20392-1C13
1/8"	15/32"	AN392-15	MS20392-1C15
1/8"	17/32"	AN392-17	MS20392-1C17
1/8"	19/32"	AN392-18	MS20392-1C19
1/8"	21/32"	AN392-21	MS20392-1C21
1/8"	23/32"	AN392-23	MS20392-1C23
1/8"	25/32"	AN392-25	MS20392-1C25
1/8"	27/32"	AN392-27	MS20392-1C27
1/8"	29/32"	AN392-29	MS20392-1C29
1/8"	31/32"	AN392-31	MS20392-1C31
1/8"	1-1/32"	AN392-33	MS20392-1C33
1/8"	1-3/32"	AN392-35	MS20392-1C35
1/8"	1-5/32"	AN392-37	MS20392-1C37
1/8"	1-7/32"	AN392-39	MS20392-1C39
1/8"	1-9/32"	AN392-41	MS20392-1C41
1/8"	1-11/32"	AN392-43	MS20392-1C43
1/8"	1-13/32"	AN392-45	MS20392-1C45
1/8"	1-17/32"	AN392-49	MS20392-1C49
1/8"	1-21/32"	AN392-53	MS20392-1C53
1/8"	1-25/32"	AN392-57	MS20392-1C57
3/16"	7/32"	AN393-7	MS20392-2C7
3/16"	9/32"	AN393-9	MS20392-2C9
3/16"	11/32"	AN393-11	MS20392-2C11
3/16"	13/32"	AN393-13	MS20392-2C13
3/16"	15/32"	AN393-15	MS20392-2C15
3/16"	17/32"	AN393-17	MS20392-2C17
3/16"	19/32"	AN393-19	MS20392-2C19
3/16"	21/32"	AN393-21	MS20392-2C21
3/16"	23/32"	AN393-23	MS20392-2C23
3/16"	25/32"	AN393-25	MS20392-2C25
3/16"	27/32"	AN393-27	MS20392-2C27
3/16"	29/32"	AN393-29	MS20392-2C29
3/16"	31/32"	AN393-31	MS20392-2C31
3/16"	1-1/32"	AN393-33	MS20392-2C33
3/16"	1-3/32"	AN393-35	MS20392-2C35
3/16"	1-5/32"	AN393-37	MS20392-2C37
3/16"	1-7/32"	AN393-39	MS20392-2C39
3/16"	1-9/32"	AN393-41	MS20392-2C41
3/16"	1-11/32"	AN393-43	MS20392-2C43
3/16"	1-17/32"	AN393-49	MS20392-2C49
3/16"	1-19/32"	AN393-51	MS20392-2C51
3/16"	1-29/32"	AN393-61	MS20392-2C61
3/16"	2-1/32"	AN393-65	MS20392-2C65
3/16"	2-3/32"	AN393-67	MS20392-2C67
3/16"	2-5/32"	AN393-69	MS20392-2C69
3/16"	2-7/32"	AN393-71	MS20392-2C71
3/16"	2-9/32"	AN393-73	MS20392-2C73
3/16"	2-13/32"	AN393-77	MS20392-2C77
1/4"	11/32"	AN394-11	MS20392-3C11
1/4"	13/32"	AN394-13	MS20392-3C13
1/4"	15/32"	AN394-15	MS20392-3C15
1/4"	17/32"	AN394-17	MS20392-3C17
1/4"	19/32"	AN394-19	MS20392-3C19
1/4"	21/32"	AN394-21	MS20392-3C21

FASTENERS & HARDWARE

MS20392 CLEVIS PIN CONTINUED

Made of steel per Mil-SP5673, cadmium plated per QQ-P-416. Drilled hole for cotter pin. Order by MS number.



DIA	LENGTH	OLD AN NUMBER	PART #
1/4"	21/32"	AN394-21	MS20392-3C21
1/4"	23/32"	AN394-23	MS20392-3C23
1/4"	25/32"	AN394-25	MS20392-3C25
1/4"	27/32"	AN394-27	MS20392-3C27
1/4"	29/32"	AN394-29	MS20392-3C29
1/4"	31/32"	AN394-31	MS20392-3C31
1/4"	1-1/32"	AN394-33	MS20392-3C33
1/4"	1-3/32"	AN394-35	MS20392-3C35
1/4"	1-5/32"	AN394-37	MS20392-3C37
1/4"	1-7/32"	AN394-39	MS20392-3C39
1/4"	1-9/32"	AN394-41	MS20392-3C41
1/4"	1-11/32"	AN394-43	MS20392-3C43
1/4"	1-13/32"	AN394-45	MS20392-3C45
1/4"	1-15/32"	AN394-47	MS20392-3C47
1/4"	1-17/32"	AN394-49	MS20392-3C49
1/4"	1-19/32"	AN394-51	MS20392-3C51
1/4"	1-21/32"	AN394-53	MS20392-3C53
1/4"	1-23/32"	AN394-55	MS20392-3C55
1/4"	1-25/32"	AN394-57	MS20392-3C57
1/4"	1-29/32"	AN394-61	MS20392-3C61
1/4"	1-31/32"	AN394-63	MS20392-3C63
1/4"	2-1/32"	AN394-65	MS20392-3C65
1/4"	2-3/32"	AN394-67	MS20392-3C67
1/4"	2-7/32"	AN394-71	MS20392-3C71
1/4"	2-13/32"	AN394-77	MS20392-3C77
5/16"	11/32"	AN395-11	MS20392-4C11
5/16"	13/32"	AN395-13	MS20392-4C13
5/16"	15/32"	AN395-15	MS20392-4C15
5/16"	17/32"	AN395-17	MS20392-4C17
5/16"	19/32"	AN395-19	MS20392-4C19
5/16"	21/32"	AN395-21	MS20392-4C21
5/16"	27/32"	AN395-27	MS20392-4C27
5/16"	29/32"	AN395-29	MS20392-4C29
5/16"	31/32"	AN395-31	MS20392-4C31
5/16"	1-3/32"	AN395-35	MS20392-4C35
5/16"	1-3/8"	AN395-45	MS20392-4C45
5/16"	1-15/32"	AN395-47	MS20392-4C47
5/16"	1-17/32"	AN395-49	MS20392-4C49
5/16"	1-25/32"	AN395-57	MS20392-4C57
5/16"	1-29/32"	AN395-61	MS20392-4C61
3/8"	17/32"	AN396-17	MS20392-5C17
3/8"	19/32"	AN396-19	MS20392-5C19
3/8"	23/32"	AN396-23	MS20392-5C23
3/8"	25/32"	AN396-25	MS20392-5C25
3/8"	27/32"	AN396-27	MS20392-5C27
3/8"	29/32"	AN396-29	MS20392-5C29
3/8"	31/32"	AN396-31	MS20392-5C31
3/8"	1-17/32"	AN396-49	MS20392-5C49
3/8"	1-21/32"	AN396-53	MS20392-5C53
3/8"	1-23/32"	AN396-55	MS20392-5C55

MS24665 COTTER PIN

AN3,4,&5 bolts use 1/16" hole size, AN6, 7, & 8 bolts use 3/32" hole size and AN9, 10, & 11 bolts use 1/8" hole size.



DIA	LENGTH	OLD AN NUMBER	PART #
Cadmium Plated Steel			
1/32"	1/2"	AN380-1-2	MS24665-5
1/32"	3/4"	AN380-1-3	MS24665-7
1/32"	1"	AN380-1-4	MS24665-9
1/16"	1/2"	AN380-2-2	MS24665-132
1/16"	3/4"	AN380-2-3	MS24665-134
1/16"	1"	AN380-2-4	MS24665-136
1/16"	1-1/4"	AN380-2-5	MS24665-138
1/16"	1-1/2"	AN380-2-6	MS24665-140
1/16"	1-3/4"	AN380-2-7	MS24665-142
1/16"	2"	AN380-2-8	MS24665-143
5/64"	1"	AN380-25-4	MS24665-212
3/32"	1"	AN380-3-4	MS24665-285
1/8"	1/2"	AN380-4-2	MS24665-349
1/8"	3/4"	AN380-4-3	MS24665-351
1/8"	1"	AN380-4-4	MS24665-353
1/8"	1-1/2"	AN380-4-6	MS24665-357
1/8"	1-3/4"	AN380-4-7	MS24665-359
1/8"	2"	AN380-4-8	MS24665-360
Stainless Steel			
1/32"	1/2"	AN381-1-8	MS24665-22
1/16"	1/2"	AN381-2-8	MS24665-151
1/16"	3/4"	AN381-2-12	MS24665-153
1/16"	1"	AN381-2-16	MS24665-155
5/64"	1/2"	AN381-25-8	MS24665-227
5/64"	1"	AN381-25-16	MS24665-231

FUEL RESISTANT O-RING

Composed of a nitrile polymer that meets MIL-P-5315 for Hydrocarbon fuel resistance as needed with jet fuel. Temperature range: -65 to +200 deg. Durometer: 70.



I.D.	O.D.	WIDTH	PART #
5/64"	13/64"	1/16"	MS29513-004
3/32"	6/25"	1/16"	MS29513-005
1/8"	.250	1/16"	MS29513-006
5/32"	9/32"	1/16"	MS29513-007
3/16"	5/16"	1/16"	MS29513-008
1/4"	3/8"	1/16"	MS29513-010
5/16"	7/16"	1/16"	MS29513-011
3/8"	1/2"	1/16"	MS29513-012
7/16"	9/16"	1/16"	MS29513-013
1/2"	.625	1/16"	MS29513-014
9/16"	11/16"	1/16"	MS29513-015
3/4"	7/8"	1/16"	MS29513-018
13/16"	15/16"	1/16"	MS29513-019
7/8"	1"	1/16"	MS29513-020
7/16"	.625	3/32"	MS29513-111
9/16"	.750	3/32"	MS29513-113
5/8"	13/16"	3/32"	MS29513-114
1-5/8"	1-13/16"	3/32"	MS29513-130
1-13/16"	2"	3/32"	MS29513-133
2-1/8"	2-5/16"	3/32"	MS29513-138
4"	4-3/16"	3/32"	MS29513-155
2"	2-1/4"	1/8"	MS29513-226
2-3/4"	3"	1/8"	MS29513-232
2-7/8"	3-1/8"	1/8"	MS29513-233
3-1/2"	3-3/4"	1/8"	MS29513-238
3-1/8"	3-1/2"	3/16"	MS29513-338

BUNA-N O-RING KIT

380 pc Buna-N o-ring kit contains 30 popular sizes, from -006 to -327. Typical static or dynamic applications include gasoline, jet fuel, water-based hydraulic fluid, glycols, etc. Temp range: -65 degrees F to +285 degrees F. Duro: 70. Meets MIL-G-21569B, cls 1 for general purpose use, AS568A, & ASTM D2000 2BG 720 EA14 EO14 EO34. Made in U.S.



CONTAINS	PART #
-006 TO -327	AS568BN70

CLEVELAND O-RINGS

For Cleveland 10-30 A,B,C, 10-72 master cylinders.

FITS	PART #
10-30 A B C 10-72	CWB199-512

HOMEBUILDERS O-RING KIT

AS568A O-RING KIT, 382 O-RINGS MADE OF 70 DURO NITRILE.SIZES 006-327. GREAT FOR HOMEBUILDERS. CONSIST OF AS568- 006-20EA 211-10EA 007-20EA 212-10EA 008-20EA 213-10EA 009-20EA 214-10EA 010-20EA 215-10EA 011-20EA 216-10EA 012-20EA 217-10EA 110-13EA 218-10EA 111-13EA 219-10EA 112-13EA 220-10EA 113-13EA 221-10EA 114-13EA 222-10EA 115-13EA 325-10EA 116-13EA 326-10EA 210-10EA 327-10EA



CONTAINS	PART #
-006 TO -327	HMBK-1

O-RING

O-RINGS FUEL PUMP FITTINGS Adapts 1/4-18 tapered threads or when interference occurs with other accessories, it may be necessary to adapt pump thread to AN fitting with these fuel pump fittings. O-rings not included. Requires 2 fittings and 2 o-rings. Straight 1/8" male brass pipe nipples. 1/8" NPT.

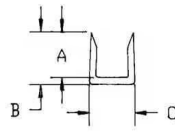


DESCRIPTION	PART #
3/8" TUBE FITTING O-RING	MS29512-06

FASTENERS & HARDWARE

FLEXIBLE GROMMET

Extruded grommets-roll form, protects and insulates wires and cables from chafing against sharp chassis edges. The serrated design is particularly suited to irregularly shaped panel holes. Depending on the chassis thickness, grommets may grip tightly by itself. If not, a touch of epoxy will keep it in place. Roll grommets is the most cost effective way to protect wire and cables from sharp edges. Sold by the foot.



MAX CHASSIS THICKNESS	INSIDE DEPTH A	OUTSIDE DEPTH B	OUTSIDE WIDTH C	PART #
.062	.155	.200	.170	FG-2193
.125	.175	.220	.210	FG-2177

H4600 HARTWELL LATCH

These latches are divided into 5 categories. 4 of these have known ranges, and the rest are all classified as misc. If you pick the misc you will get random size ranges. Surplus no certs.



SIZE	PART #
MISC	H4600-MISC
.072-.125	H4600-072-125
.040-.142	H4600-040-142
.064-.196	H4600-064-196
.040-.250	H4600-040-250

MS28775 O-RING (AN6227B)

Provide effective sealing over wide ranges of pressure, temperature and movement – sealing pressure in both directions and reducing friction and wear on moveable parts. When used as gaskets or static seals, these O-rings permit metal-to-metal contact and allow almost unlimited pressures under extreme vibration. They should be lubricated before installation, and constant lubrication should be provided for running seals to avoid excessive wear.



I.D.	O.D.	OLD AN NUMBER	THICKNESS	PART #
1/8"	.250	AN6227B-1	1/16"	MS28775-006
5/32"	9/32"	AN6227B-2	1/16"	MS28775-007
3/16"	5/16"	AN6227B-3	1/16"	MS28775-008
7/32"	11/32"	AN6227B-4	1/16"	MS28775-009
1/4"	3/8"	AN6227B-5	1/16"	MS28775-010
5/16"	7/16"	AN6227B-6	1/16"	MS28775-011
3/8"	1/2"	AN6227B-7	1/16"	MS28775-012
.983	1.117		.067	MS28775-022
3/8"	9/16"	AN6227B-8	3/32"	MS28775-110
7/16"	.625	AN6227B-9	3/32"	MS28775-111
1/2"	11/16"	AN6227B-10	3/32"	MS28775-112
9/16"	.750	AN6227B-11	3/32"	MS28775-113
5/8"	13/16"	AN6227B-12	3/32"	MS28775-114
11/16"	7/8"	AN6227B-13	3/32"	MS28775-115
3/4"	15/16"	AN6227B-14	3/32"	MS28775-116
3/4"	1"	AN6227B-15	1/8"	MS28775-210
13/16"	1-1/16"	AN6227B-16	1/8"	MS28775-211
7/8"	1.125	AN6227B-17	1/8"	MS28775-212
15/16"	1-3/16"	AN6227B-18	1/8"	MS28775-213
1"	1-1/4"	AN6227B-19	1/8"	MS28775-214
1-7/16"	1-5/16"	AN6227B-20	1/8"	MS28775-215
1-1/8"	1-3/8"	AN6227B-21	1/8"	MS28775-216
1-3/16"	1-7/16"	AN6227B-22	1/8"	MS28775-217
1-1/4"	1-1/2"	AN6227B-23	1/8"	MS28775-218
1-15/16"	1-9/16"	AN6227B-24	1/8"	MS28775-219
1-3/8"	1-5/8"	AN6227B-25	1/8"	MS28775-220
1-7/16"	1-11/16"	AN6227B-26	1/8"	MS28775-221
1-1/2"	1-3/4"	AN6227B-27	1/8"	MS28775-222
1.724	1.744		3/16"	MS28775-224
1-1/2"	1-7/8"	AN6227B-28	3/16"	MS28775-325
1-5/8"	2"	AN6227B-29	3/16"	MS28775-326
1-3/4"	2-1/8"	AN6227B-30		MS28775-327

AN742 PLAIN CHAMP

Aluminum alloy meets specification QQ-A-362, condition T. Heat treated to a minimum tensile strength of 50,000 psi, in accordance with AN-QQ-H-186. Also available in steel.



TUBE O.D.	PART #
3/16"	AN742-D3
1/4"	AN742-D4
5/16"	AN742-D5
3/8"	AN742-D6
1/2"	AN742-D8
5/8"	AN742-D10
3/4"	AN742-D12
1"	AN742-D16
1 1/4"	AN742-4C
7/16"	AN742-7C
STAINLESS PLAIN CLAMP 3/8	AN742-6F

CLAMP LOOP

Clamps as used on steel tubing fuselage assemblies. All sizes with single bolt lugs. (-7 also available as 2-lug) Uses AN3 series bolts. Made of unplated steel per QQ S 698 1015 T4. Supersedes AN741.



I.D.	LUGS	AN741	PART #
1/2"	1	-4	MS27405-4
5/8"	1	-5	MS27405-5
3/4"	1	-6	MS27405-6
7/8"	1	-7	MS27405-7
7/8"	2	-T7	MS27405T7

RESERVOIR O-RING

Reservoir O-Ring

FOR	PART #
CWB199-513 KIT	CWB101-60001

FLUSH LATCH

These surplus latches are sold in various sizes. The model numbers may be the same but the depth range may be different from piece to piece. The Hartwell is a unique spring loaded, trigger action latch, for cowling and access doors. Made of corrosion resistant steel. Rivet or spot weld to structure. Mounting plate is 2-1/8" x 1-3/8". Latch extends 1/2" beyond plate.



LENGTH	WIDTH	PART #
2-11/16"	1-7/16"	H5000-2

CLAMP TOOL

For attaching Oetiker clamps.

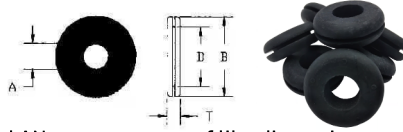


DESCRIPTION	PART #
STRAIGHT JAW PINCHERS TOOL	10981

FASTENERS & HARDWARE

SYNTHETIC RUBBER GROMMET (MS35489)

Flexible, hot oil and coolant resistant grommets. Used to protect tubing, wiring, and control cables where they pass through bulkheads and fire walls. Made of black synthetic rubber to Spec. MIL-G-3036. Order grommets by MS number plus dash number for size. Example: MS35489-2. MS35489 grommets and AN931 grommets of like dimensions are interchangeable.



B SIZE	GROOVE D	GROOVE WIDTH	HOLE DIAMETER	THICKNESS	OLD AN31	PART #
.3440	1/4"	1/16"	1/8"	3/16"		MS35489-1
.7500	9/16"	1/16"	1/8"	3/16"	2-9	MS35489-2
1.250	1"	1/16"	1/8"	1/4"	2-16	MS35489-3
.7500	9/16"	1/16"	3/16"	3/16"	3-9	MS35489-134
.4375	5/16"	1/16"	3/16"	3/16"	3-5	MS35489-4
.8750	5/8"	1/16"	3/16"	3/16"	3-10	MS35489-5
.6250	7/16"	1/16"	3/16"	3/16"	4-7	MS35489-6
1.000	3/4"	1/16"	1/4"	1/4"	4-12	MS35489-7
1.250	1"	1/16"	1/4"	1/4"	4-16	MS35489-8
.8125	9/16"	1/16"	5/16"	5/16"	5-9	MS35489-9
1.000	3/4"	1/16"	5/16"	5/16"	5-12	MS35489-10
1.0625	13/16"	1/16"	5/16"	5/16"	5-13	MS35489-118
.8750	5/8"	1/16"	3/8"	5/16"	6-10	MS35489-11
1.250	1"	1/16"	3/8"	5/16"	6-16	MS35489-12
.9375	11/16"	1/16"	7/16"	5/16"	7-11	MS35489-13
1.0625	13/16"	1/16"	1/2"	5/16"	8-13	MS35489-14
1.500	1-1/4"	1/16"	1/2"	5/16"	8-20	MS35489-15
1.0625	13/16"	1/4"	1/2"	1/2"	8-13	MS35489-101
1.0625	13/16"	1/16"	9/16"	5/16"	9-13	MS35489-16
1.125	7/8"	1/16"	5/8"	5/16"	10-14	MS35489-17
1.500	1-1/4"	1/16"	5/8"	1/4"	10-20	MS35489-18
1.3125	1"	1/16"	11/16"	3/8"	11-16	MS35489-19
1.375	1-1/16"	1/16"	3/4"	3/8"	12-17	MS35489-20
1.625	1-1/4"	1/16"	3/4"	1/4"	12-20	MS35489-135
1.8125	1-7/16"	1/16"	3/4"	3/8"	12-23	MS35489-21
1.625	1-1/4"	1/16"	7/8"	7/16"	14-20	MS35489-22
1.750	1-3/8"	1/16"	1"	7/16"	16-22	MS35489-23
2.250	1-7/8"	1/16"	1"	7/16"	16	MS35489-24

STEPLESS EAR CLAMPS

Single ear stepless clamps. Special jaw pincher required for installation.



GRIP RANGE	PART #
.378-.445	113-505R
.425-.524	133-706R
.453-.551	140-706R
.571-.669	170-706R

4002 SERIES AIRLOC FASTENER

Stainless steel 1/4 turn studs. If total panel thickness is near top of thickness, next dash number is recommended. This series utilizes grommets which must be installed into the top panel. Dash 15 and shorter are self-captivating. Dash 16 and longer require a split retaining ring.



PANEL THICKNESS	SLOTTED PART #	PHILLIPS PART #
.051-.080	AL4002-2S	AL4055-2S
.081-.110	AL4002-3S	AL4055-3S
.111-.140	AL4002-4S	AL4055-4S
.141-.170	AL4002-5S	AL4055-5S
.171-.200	AL4002-6S	AL4055-6S
.201-.230	AL4002-7S	AL4055-7S
.231-.260	AL4002-8S	AL4055-8S
.261-.290	AL4002-9S	AL4055-9S
.291-.320		AL4055-10S

2600 & 2700 AIRLOC FASTENER - STAINLESS STEEL

2600: Stainless slotted 1/4 turn fastener - plus flush. If total panel thickness is near top of range -next greater size is recommended. 2700:



Stainless slotted 1/4 turn fastener -flush. The dash 5 and greater stud assembly requires retaining rings., dash 4 and smaller are self-retaining. Solid rings hold stud assembly stationary to top panel. Split rings allow stud assembly to move freely within the top panel. If total panel thickness is near top of range -next greater size is recommended.

PANEL THICKNESS	AL2600 PART #	AL2700 PART #
.030-.059	AL2600-1S	AL2700-1S
.060-.089	AL2600-2S	AL2700-2S
.090-.119	AL2600-3S	AL2700-3S
.150-.179	AL2600-4S	AL2700-5S
.180-.209	AL2600-6S	AL2700-6S
.210-.239	AL2600-7S	AL2700-7S
.240-.269	AL2600-8S	AL2700-8S
.270-.299	AL2600-9S	AL2700-9S
.300-.329	AL2600-10S	AL2700-10S
.330-.359	AL2600-11S	AL2700-11S
.390-.419		AL2700-13S
.420-.449		AL2700-14S

HOSE CLAMPS

Hose Clamp Low-Press Type F



MAX O.D.	PART #
7/8"	MS35842-10
1-7/8"	MS35842-12
2-7/8"	MS35842-13
3-1/2"	MS35842-14

MS21919 CUSHION CLAMP

Loop-type, wedge cushioned, line support clamps, made of aluminum alloy. Meets Specification MIL-C- 8603. F in the part number designates fuel resistant, W in the part number designates it is cushion wedge type and will not pinch line. MS21919 clamp hole diameter is .199 to .209. *Fuel resistant. The DG line of clamps has been phased, out and will no longer be available once stock is depleted.



TUBE SIZE	AN742 EQUIV	PART #
WEDGE		
1/8"	D4C	MS21919-WDG2
3/16"	D5C	MS21919-WDG3
1/4"	D6C	MS21919-WDG4
5/16"	D7C	MS21919-WDG5
3/8"	D8C	MS21919-WDG6
7/16"	D9C	MS21919-WDG7
1/2"	D10C	MS21919-WDG8
1/2"	D10C	MS21919-WDG8
9/16"	D11C	MS21919-WDG9
5/8"	D12C	MS21919-WDG10
11/16"	D13C	MS21919-WDG11
3/4"	D14C	MS21919-WDG12
13/16"	D15C	MS21919-WDG13
7/8"	D16C	MS21919-WDG14
15/16"	D17C	MS21919-WDG15
1"	D18C	MS21919-WDG16
1-3/16"	D19C	MS21919-WDG17
1-1/8"	D20C	MS21919-WDG18
1-3/16"	D21C	MS21919-WDG19
1-1/4"	D22C	MS21919-WDG20
1-5/16"	D23C	MS21919-WDG21
1-3/8"	D24C	MS21919-WDG22
1-7/16"	D25C	MS21919-WDG23
1-1/2"	D26C	MS21919-WDG24
1-9/16"	D27C	MS21919-WDG25
1-5/8"	D28C	MS21919-WDG26
1-11/16"	D29C	MS21919-WDG27
1-11/16"	D29C	MS21919-WDG28

CUSHION

TUBE SIZE	AN742 EQUIV	PART #
1/8"	D4C	MS21919-DG2
7/16"	D9C	MS21919-DG7
9/16"	D11C	MS21919-DG9
13/16"	D15C	MS21919-DG13
1-1/16"	D19C	MS21919-DG17
1-3/16"	D21C	MS21919-DG19
1-5/16"	D23C	MS21919-DG21
1-9/16"	D27C	MS21919-DG25

FASTENERS & HARDWARE

AIRLOC GROMMET

Stainless steel.



OUTER PANEL	MOUNT	PART #
.064 MAX	FLUSH	AL4002-GS
.065 PLUS	PLUS FLUSH	AL4002-HS
.065 MAX	PLUS FLUSH	AL4002-NS
.066 PLUS	PLUS FLUSH	AL4002-OS

RETAINING RING

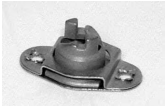
Non snap-in studs only for series 2600 & 2700. Order separately. Retaining rings are required for stud length dash numbers 3-5 and greater. Studs with smaller dash numbers are self-captivating and retaining rings are not used. Solid rings are used to hold stud assemblies stationary to top panel. Split ring allows stud assemblies to move freely within the top panel. Steel, cadmium plated.



RING TYPE	PART #
SPLIT	AL2600-SW
SPLIT	AL4002-SWSS
SPLIT	2600-SW2
SOLID	2600-LW

STAINLESS STEEL RECEPTACLE

Stainless steel, plain floating used 1/8" rivets to attach.



RIVET HOLE	PART #
PLAIN FLOATING	AL244-16S

STAINLESS STEEL SNAP RING

All stainless steel snap ring used with grommets.



DESCRIPTION	PART #
SNAP RING	AL40G26-1

COWL MOUNTS

Quarter turn locking receptacle available in two types. FAA/PMA approved. Cessna 172 for #2 lion stud, or camloc stud #2700-1.



DESCRIPTION	PART #
CESSNA 172P & F172P	J-7444-14
CESSNA 172P, F172P, & 172Q	J-7444-24

RECEPTACLE STANDARD

Standard mounting version, 450 degrees maximum temp. Silicon Bronze, cadmium plated. Attach with 3/32" rivets. For use with the 2600 and 2700 series camlocs.



RIVET HOLE	THICKNESS	PART #
COUNTERSUNK	.064-.081	212-12D
STAINLESS PLAIN	.064-.081	212-12S
PLAIN	.064-.081	212-12N

2600 & 2700 CAMLOC FASTENER

2600 camloc fasteners exceed requirement for MIL-F- 5591, Style 3, Size 2. Shear and tensile strength rated 200 lbs. Studs are made of steel, except those noted as stainless.



"G" TOTAL THICKNESS	STEEL 2600 PART #	STAINLESS 2600 PART #	STEEL 2700 PART #
<u>SLOTTED</u>			
.030-.059	2600-1		
.060-.089	2600-2		
.090-.119	2600-3	2600-2S	2700-2
.120-.149	2600-4		2700-3
.150-.179	2600-5		2700-4
.180-.209	2600-6		2700-5
.210-.239	2600-7		2700-6
.240-.269	2600-8		2700-7
.270-.299	2600-9		2700-8
.300-.329	2600-10		2700-9
.339-.359	2600-11		2700-10
.360-.389	2600-12		2700-11
.390-.419	2600-13		2700-12
.420-.449	2600-14		2700-13
<u>WINGED</u>			
.060-.089	2600-2W		2700-14
.090-.119	2600-3W		
.150-.209	2600-5W		
.180-.209	2600-6W		
.210-.239	2600-7W		

4002 SERIES CAMLOC STUD

Refer to chart before choosing. To select the proper stud length, FIRST select the grommet, next select the receptacle. Once this is done, refer to the 4002 stud selection chart.



SLOTTED PART #	PHILLIPS PART #	WINGED PART #
4002-1		4002-2W
4002-2		4002-3W
4002-3	40S5-3	4002-4W
4002-4	40S5-4	4002-5W
4002-5	40S5-5	4002-6W
4002-6	40S5-6	4002-7W
4002-7	40S5-7	4002-8W
4002-8	40S5-8	4002-9W
4002-9	40S5-9	
4002-10	40S5-10	
4002-11		
4002-12		
4002-13		
4002-14		
4002-15		
4002-17		

CAMLOC GROMMET

Total grip thickness is comprised 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 allowance for paint or other protective finishes. Note: If the grip thickness is near the top of the stud grip range, the next larger stud should be used. This will maintain the positive locking action of the fastener under vibration. To select the proper stud length, FIRST select the grommet, next select the receptacle. Once this is done, refer to the 4002 stud selection chart.



OUTER PANEL	MOUNT	PART #
.064 MAX	FLUSH	4002-G
.065 & GREATER	FLUSH	4002-H
.065 MAX	PLUS FLUSH	4002-N
.066 & GREATER	PLUS FLUSH	4002-O

CAMLOC RECEPTACLE

Floating or rigid, use 1/8" rivets to attach in either plain or dimpled (D) holes. Rigid are silicon bronze or stainless steel, Floating have a steel plate and retainer. For use with 4002 Series fasteners.



RIVET HOLE	TYPE	THICKNESS	PART #
DIMPLED	RIGID	.084-.096	214-16D
NARROW	RIGID	.081-.096	214-16N
PLAIN			
DIMPLED	FLOATING	.050-.090	244-16D
PLAIN	FLOATING	.050-.090	244-16

FASTENERS & HARDWARE

RETAINING RING & SNAP RING

Steel snap ring fits all size grommets. Retaining ring fits studs.



DESCRIPTION	PART #
SNAP RING	R4G
RETAINING RING	4002-SW

STUD EJECTOR SPRING

Provides full retraction of stud assembly to allow opening and closing of equipment without the possibility of jamming or damage. Made of spring steel and is Cad II plated. Use with Plus Flush Grommets. Plain rivet hole diameter .128"-.134". Length from center hole to center rivet holes is 3" and 3.75".



DESCRIPTION	PART #
STUD EJECTOR	4002-SN

DZUS FASTENER TOOL

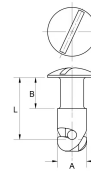
Fits slot head 1/4 turn fasteners. Manufactured of stainless steel and has three different sized radiuses to match the slots in various 1/4 turn fasteners. Reduces the possibility of damaging fasteners and body panels. Has non-slip plastic grip handle.



FITS	PART #
1/4 TURN	71600

DZUS FASTENER

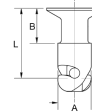
Fastener studs are made of steel, heat treated and cadmium plated. Springs are made of music wire, cadmium plated. Grommets are made of aluminum or steel, cadmium plated. No special tools needed to operate the fasteners.



DIM IN INCHES			USE	USE	PART
A	B	L	GROMMET	SPRING	#
.1875	.050	.400	GA3-175	S3-150	A3-40
.1875	.075	.250	GA3-175	S3-150	AJ3-25
.1875	.100	.300	GA3-175	S3-150	AJ3-30
.1875	.150	.350	GA3-175	S3-150	AJ3-35
.1875	.200	.400	GA3-175	S3-150	AJ3-40
.2500	.100	.250	GA4-250	S4-200	AJ4-25
.2500	.100	.300	GA4-250	S4-200	AJ4-30
.2500	.100	.300	GA4-250	S4-200	AJ4-30SS
.2500	.150	.350	GA4-250	S4-200	AJ4-35
.2500	.200	.400	GA4-250	S4-200	AJ4-40
.2500	.250	.500	GA5-312	S4-200	AJ4-50
.3125	.125	.300	GA5-312	S5A-200	AJ5-30
.3125	.125	.350	GA5-312	SA5-200	AJ5-35
.3125	.125	.400	GA5-312	S5A-200	AJ5-40
.3125	.125	.400	GA5-312	S5A-200	AJ5-40SS
.3125	.190	.450	GA5-312	S5A-200	AJ5-45
.3125	.250	.500	GA5-312	SA5-200	AJ5-50
.3750	.190	.400	GA6-350	S6-275	AJ6-40
.3750	.250	.500	GA6-350	S6-275	AJ6-50

DZUS FJ TYPE FASTENER

FJ has flush head, long undercut.



DIM IN INCHES			USE	USE	PART
A	B	L	GROMMET	SPRING	#
.2500	.175	.350	GF4-150	S4-200	FJ4-35
.2500	.225	.450	GF4-140	S4-200	FJ4-45
.3125	.225	.400	GF5-150	S5-200	FJ5-40

DZUS GA & GF TYPE GROMMET

Made of aluminum for standard studs excepting flush heads. Type "GA" full grommet for use with "A", "AJ" studs. Type "GF" grommet - for use with "F" and "FJ" studs.



DEFLECTION	HEIGHT	INSIDE DIAMETER	MAX DEPTH OF PANEL	PART #
.015"	.175"	.21875"	.025"	GA3-175
.015"	.200"	.21875"	.050"	GA3-200
.025"	.250"	.26200"	.050"	GA4-250
.028"	.312"	.31900"	.062"	GA5-312
.028"	.375"	.37500"	.125"	GA5-375
.028"	.350"	.43700"	.065"	GA6-350
.028"	.375"	.43700"	.100"	GA6-375
.025"	.175"	.31250"	.075"	GF4-175

FASTENERS & HARDWARE

DZUS RETAINING SPRING

Music wire, bright zinc plate with yellow chromate dip per ASTM-B-633, Type 11, SC2.



DEFLECTION O	HEIGHT M	INSIDE DIAMETER	RIVET HOLE SIZE	PART #
.040"	.175"	.625"	3/32"	S3-175
.045"	.200"	.750"	3/32"	S4-200
.045"	.225"	.750"	3/32"	S4-225
.047"	.200"	1.00"	1/8"	S5A-200
.047"	.225"	1.00"	1/8"	S5A-225
.045"	.275"	1.375"	1/4"	S6-275

QUARTER TURN SPRING

Different sizes as used in LongEze and Cozy kits. Spring 187 and Spring-250 are landing gear springs commonly used on the Citabria aircraft. SPRING-MG used on the Pober Jr Ace.



SIZE	PART #
.875 X .120 X 4"	C-68
.06 X .75 X 8-1/2"	C-133
.32 X 4.37 X 3-3/4"	C-161
.105 X 9/16 X 3-3/4"	SPRING-1887
.187 X 3/4 X 3-1/2"	SPRING-187
.35 X .06 X 1/2"	SPRING-5118
.35 X .06 X 10"	SPRING-5128
.35 X .05 X 30"	SPRING-5129
.375 X .062 X 12.5"	SPRING-5130

STAINLESS STEEL RETAINING SPRING

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



STUD SIZE	PART #
3	SX-520SS
4	SX-523SS
5	SX-510SS

EJECTOR SPRING

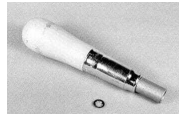
302 stainless steel, passivated. When using an ejector spring, add .040 to the total material thickness.



O.D.	I.D.	THICKNESS	PART #
.38"	.22"	.020"	43-13-1-24

INSTALLATION TOOL

For installing the push on retaining rings only.



DESCRIPTION	PART #
TOOL	85-0-22543-11

NYLON WASHER

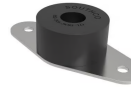
Flat nylon washer, natural color. When using a wear washer, add .020 to the total material thickness.



O.D.	I.D.	THICKNESS	PART #
.340"	.245"	.020"	82-46-103-39
.515"	.296"	.020"	85-46-103-39

RUBBER VIBRATION MOUNT

Used when isolation of vibration is needed between two pieces of material.



DESCRIPTION	PART #
MOUNT	82-35-306-10

SOUTHCO FASTENERS

Commonly used on the Cessna 150 & 172. Stud lengths are stamped on the head. Fasteners are phillips recess. The third number group indicated stud length. Made from 1008 steel. Finish Dacronized steel with zinc flaked chromate coating. 82 series are .196" diameter. Example 82-19-120-16 The 85 series are .250" diameter.



MINIMUM THICKNESS	MAXIMUM DIA	THICKNESS	PART #
.110"	.250"	.129"	85-11-120-16
.130"	.250"	.149"	85-11-140-16
.150"	.250"	.169"	85-11-160-16
.290"	.196"	.309"	82-19-300-16
.310"	.196"	.329"	82-19-320-16
.170"	.250"	.189"	85-11-180-16
.090"	.250"	.109"	85-11-100-16
.190"	.250"	.209"	85-11-200-16
.090"	.196"	.109"	82-19-100-16
.110"	.196"	.129"	82-19-120-16
.130"	.196"	.149"	82-19-140-16
.150"	.196"	.169"	82-19-160-16
.170"	.196"	.189"	82-19-180-16
.190"	.196"	.209"	82-19-200-16
.210"	.196"	.229"	82-19-220-16
.230"	.196"	.249"	82-19-240-16
.250"	.196"	.269"	82-19-260-16
.270"	.196"	.289"	82-19-280-16

SOUTHCO RECEPTACLE

Leaf spring type: available with or without base. When riveting, spring must float freely, attach countersink or dimple 3/32" rivet.



DESCRIPTION	PART #
WITHOUT BASE	82-35-295-15
WITH BASE	82-35-302-15
WITH BASE	85-35-295-15

SPLIT/PUSH-ON RING

Split ring type or push-on type. Split ring may be installed by hand or tool operation. Push-on type by tool installation. 302 stainless passivated.



TYPE	PART #
SPLIT	82-32-101-20
PUSH-ON	82-32-201-20
SPLIT	85-34-101-20
PUSH-ON	85-34-201-20

HI-TORQUER EXPANDABLE

Sizes No. 4, 6, & 8 have a socket head capscrew and supplied hex key for installing the Nutsert. The "916" single size placing tool offers an inexpensive means of installing small quantities of Nutsert in the field with a low cost, expendable tool. Ideal to send out with a small bag of Nutserts for accessory installation, field modifications, or rework and repair. Designed for use in nonproduction type situations, the "916" will satisfactorily place up to 100 Nutsert. Each tool is individually packaged with instructions for use. 10, 1/4", 5/16" & 3/8" Hex head screw. This tool requires a standard socket wrench to drive the hex head screw.



THREAD SIZE	PART #
4-40	AAT-916-440
6-32	AAT-916-632
8-32	AAT-916-832
10-32	AAT-916-1032
1/4"-20	AAT-916-420
1/4"-28	AAT-916-428
5/16"-18	AAT-916-518
5/16"-24	AAT-916-524
3/8"-16	AAT-916-616
3/8"-24	AAT-916-624

FASTENER HEADER REPLACEMENT TOOL

Match thread size with fastener header. Available in 632, 832 and 1032 thread sizes.



FITS	PART #
C845-632	170-632
C845-832	170-832
C845-1032	170-1032

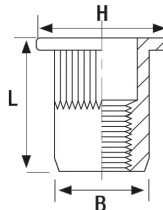
FASTENERS & HARDWARE

AIRCRAFT NUTSERT

Nutsert's unique swaging action and the axial knurl under the flange are the secrets behind its superior holding strength. Nutserts are a one-piece design consisting of a nut portion and a sleeve portion. A rotating tool mandrel, which is inserted into the threads from the sleeve side, causes a separation at the grooved break area, drawing the "nut" portion into the sleeve. As the nut portion pulls-up inside the sleeve, the sleeve is expanded, exerting a powerful 360 degree swage fit against the parent material. This expansion also causes the axial knurl, which is under the flange, to bite into the side of the hole, while the placing tool nose rolls the flange over, causing an additional locking against the top edge of the hole – a double-locking effect to insure superior torque-out resistance.



B	H	L	THREAD	PART#
.1875"	.206"	.390"	4-40	ATS2-440
.2185"	.234"	.390"	6-32	ATS2-632
.2495"	.265"	.380"	8-32	ATS2-832
.2805"	.296"	.380"	10-32	ATS2-1032
.3745"	.390"	.525"	1/4"-20	ATS2-420
.3745"	.390"	.525"	1/4"-28	ATS2-428
.4995"	.515"	.625"	5/16"-18	ATS2-518
.4995"	.515"	.625"	5/16"-24	ATS2-524
.5615"	.578"	.750"	3/8"-16	ATS2-616
.5615"	.578"	.750"	3/8"-24	ATS2-624



AIRCRAFT RIVNUT

The Rivet Nut is a one-piece internally threaded and counterbored 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. Available in keyed or keyless open ends.



THREAD SIZE	GRIP RANGE	DRILL SIZE	OLD RNA NUMBER	PART #
FLAT HEAD KEYLESS				
6-32	.010-.075"	#12	RNA632-075	MS27130A7
6-32	.075-.120"	#12	RNA632-120	MS27130A8
8-32	.010-.075"	#2	RNA832-075	MS27130A13
8-32	.075-.120"	#2	RNA832-120	MS27130A14
10-32	.010-.080"	1/4"	RNA1032-080	MS27130A25
10-32	.080-.130"	1/4"	RNA1032-120	MS27130A26
10-32	.130-.180"	1/4"	RNA1032-180	MS27130A27
FLAT HEAD KEYED				
6-32	.075-.120"	#12	RNA632-120K	MS27130A8K
8-32	.010-.075"	#2	RNA832-075K	MS27130A13K
8-32	.075-.120"	#2	RNA832-120K	MS27130A14K
10-32	.010-.080"	1/4"	RNA1032-080K	MS27130A25K
100° COUNTERSUNK KEYLESS				
6-32	.065-.106"	#12	RNA632-106	MS27130A87
6-32	.106-.161"	#12	RNA632-161	MS27130A88
8-32	.065-.106"	#2	RNA832-106	MS27130A93
8-32	.106-.161"	#2	RNA832-161	MS27130A94
10-32	.065-.116"	1/4"	RNA1032-116	MS27130A99
10-32	.116-.166"	1/4"	RNA1032-166	MS27130A100
100° COUNTERSUNK KEYED				
6-32	.065-.106"	#12	RNA632-106K	MS27130A87K
8-32	.065-.106"	#2	RNA832-106K	MS27130A93K
6-32	.010-.075"	#12	RNA632-075K	MS27130A7K

HI-TORQUER NUTSERT BASE TOOL AND CONVERSION KITS

The Hi-Torquer manual placing tool system offers a low-cost method of installing Nutserts Threaded inserts. The Hi-Torquer incorporates a Quick-Change thread adaptation kit which makes it possible to place different thread sizes without the need for any tools like allen wrenches or screw drivers. One Hi-Torquer may be used to set all sizes of Nutserts simply by using the appropriate thread conversion kit to change from one thread size to another. Order note: For one complete tool, order one base tool AA-112 and the appropriate AAT-202 conversion kit. Order additional conversion kits for different sizes.



DESCRIPTION	PART #
HI-TORQUE TOOL	AA-112
THREAD SIZE	CONVERSION KIT
4-40	AAT-202-440
6-32	AAT-202-632
8-32	AAT-202-832
10-32	AAT-202-1032
1/4"-20	AAT-202-420
1/4"-28	AAT-202-428
5/16"-24	AAT-202-524
5/16"-18	AAT-202-518
3/8"-24	AAT-202-624
3/8"-16	AAT-202-616

FASTENER HEADER TOOL

Wrench type rivnut fastener header for installing aluminum or steel rivnuts in 6-32, 8-32, and 10-32 thread sizes. Always lubricate 1/2" jackscrew threads before using.



THREAD SIZE	REPLACEMENT MANDREL	PART #
6-32	J70-632	C845-632
8-32	J70-832	C845-832
10-32	J70-1032	C845-1032

INSTALLER TOOL

Converts your conventional hand pop riveter into an economical Riv-Nut installer tool.



THREAD SIZE	PART #
6-32	R290-632
8-32	R290-832
10-32	R290-1032

FINISHING: METAL, FABRIC, & PAINT

MEK

Solvent used to remove coatings for repairs, for clean up, and to release cemented seams.



PART#	SIZE
1100-QT	QUART
1100-GAL	GALLON

ACETONE

Acetone is universally used as a cleaner. It is used to remove lacquer finishes and for cleaning up after painting. It will soften acrylics or lacquers that have set-up in spray guns or hoses. But it has little effect on polyurethane which has cured in the gun or lines.



PART#	SIZE
1200-QT	QUART
1200-GAL	GALLON

ALKALINE DETERGENT CLEANER

Recommended as an alkaline metal surface cleaner to remove all oil, grease and silicone in preparation for etching. A very effective vinyl upholstery and interior cabin or car cleaner. Dilute 1 cup to 1 gallon or stronger for engine and cowl. Apply with sponge, brush or spray.



PART#	SIZE
XOFF-310-QT	QUART
XOFF-310-GAL	GALLON

PAINT CLEANING SOLVENT

A mild blend formulated to remove oil, silicone, wax, and other contaminants from all painted or primed surfaces without biting into or damaging the coating.



PART#	SIZE
C2210-QT	QUART
C2210-GAL	GALLON

METL-SOL METAL CLEANER

A strong solvent blend formulated to remove oil, silicone, wax and other contaminants from all metal surfaces before priming. Not recommended for painted surfaces.



PART#	SIZE
C2200-QT	QUART
C2200-GAL	GALLON

RIB LACE CORD

A coated cord with over 40 lbs. tensile strength. Standard RLC-S round cord measures .035 diameter, 60 lbs. strength. Flat RLC-F .012x.080, 50 lbs. strength, flat braided. Each roll contains 500 yards.



PART#	TYPE
RLC-S	ROUND
RLC-F	FLAT

RIB LACING TAPE

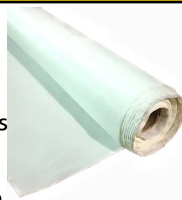
50 yd. rolls of woven polyester twill tape with high tack adhesive backing which eliminates the time-consuming procedure of mounting with fabric coating. Strength – 96 lbs. per 1/2" width. Available in 1/4", 3/8", and 1/2" widths.



PART#	WIDTH
RLRT-1/4	1/4"
RLRT-3/8	3/8"
RLRT-1/2	1/2"

UNCERTIFIED LIGHT P106 FABRIC

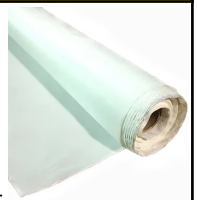
Lightweight smooth fabric recommended for covering light aircraft with a wing load under 9 LBS p/sq ft and a vne less than 160 mph. Thread count 94X94/in. Weight 1.7 OZ breaking strength over 70 lbs/in. Elongation at 57 lbs IN. Warp 9.3%. Fill 10.9%. Bursting strength: 161 PSI. Tear strength: Warp 6.5 LBS. Fill 7.7 lbs. 70" Wide. Sold by the linear yard. 72" wide



PART#	WEIGHT
P106-62	1.7 OUNCE

MEDIUM P103 FABRIC

Considered standard fabric. Recommended for normal service and is widely used on all types of aircraft regardless of wing loading or horsepower. Thread count: 68 x 68/in., Weight 2.7 oz. sq. yd. Breaking strength: over 115 lbs/in, Elongation at 70 lbs. in/ Warp 9.6%, Fill 9.4%, Bursting strength: 226 PSI, Tear strength: Warp 14.0 lbs, Fill 14.8 lbs. Tension 54.2 oz/in. Sold by the linear yard. 72" wide.



PART#	WEIGHT
P103-71	2.7 OUNCE

FINISHING: METAL, FABRIC, & PAINT

HEAVY FABRIC

Extra heavy-duty fabric recommended for the most severe operating conditions and very high wing-loading aircraft. It is suitable for all aircraft where a tough, durable, low elongation, high-tension fabric is required.



PART#	WIDTH	WEIGHT
P99-70	72 INCHES	3.4 OUNCE

ALUMINUM GROMMETS

3/4" o.d., hole size 1/4". Box of 100.



PART#
11-43-A

BIAS CUT FINISHING TAPE

Pinked edge – bias cut (45 degrees to edge). Especially useful for trimming compound components such as round wing tips and tail surfaces. Bias tape will stretch to conform to the required contour without the usual wrinkles. Bias tapes are spliced with a sewn seam at 50" intervals.



PART#	LENGTH	WEIGHT
2X25-P110BS	25 YARDS	2.4 OUNCE
3X25-P110BS	25 YARDS	2.4 OUNCE
4X25-P110BS	25 YARDS	2.4 OUNCE

PINKED FINISHING TAPE

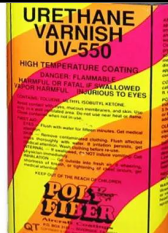
Pinked edge tape in various fabric weight and lengths. Linear cut. Sold by the roll.



PART#	LENGTH	WEIGHT
1X25-P103	25 YARDS	2.7 OUNCE
1-1/2X25-P103	25 YARDS	2.7 OUNCE
2X25-P103	25 YARDS	2.7 OUNCE
2X50-P103	50 YARDS	2.7 OUNCE
3X25-P103	25 YARDS	2.7 OUNCE
4X25-P103	25 YARDS	2.7 OUNCE
1X25-P106	25 YARDS	1.7 OUNCE
1-1/2X25-P106	25 YARDS	1.7 OUNCE
2X50-P106	50 YARDS	1.7 OUNCE
3X25-P106	25 YARDS	1.7 OUNCE
4X25-P106	25 YARDS	1.7 OUNCE
6X25-P106	25 YARDS	1.7 OUNCE

URETHANE VARNISH

A tough, light, and fast non-chalking, weather chemical and solvent resistant two-part urethane varnish especially for aircraft and marine wood surfaces which will be exposed to severe environmental conditions. Catalyst U865 must be ordered separately. Mix Ratio: 1 part catalyst to 2 parts base.



PART#	SIZE
UV-550-QT	QUART
UV-550-GAL	GALLON

POLY TAK FABRIC CEMENT

A very high strength cement especially for Dacron fabric. FAA approved to attach fabric to the airframe. Will adhere to most surfaces such as aluminum, steel, Fiberglass laminates, magnesium, glass and wool.



PART#	SIZE
PLY-TK-PT	PINT
PLY-TK-QT	QUART
PLY-TK-GAL	GALLON

POLY BRUSH TINTED

A tinted, 1 part air drying resin used for the first 2 or 3 coats to penetrate and seal the fabric weave and assure good adhesion. Also used to attach the finishing tapes and reinforcing patches. Apply with a brush as supplied or may be thinned 25% with Poly-Dope reducer and applied with a spray gun to avoid brush marks and cut application.



PART#	SIZE
PLY-BRSH-QT	QUART
PLY-BRSH-GAL	GALLON
PLY-BRSH-5GAL	5 GALLON

POLY BRUSH UNTINTED

An un-tinted, 1 part air drying resin used for the first 2 or 3 coats to penetrate and seal the fabric weave and assure good adhesion. Also used to attach the finishing tapes and reinforcing patches. Apply with a brush as supplied or may be thinned 25% with Poly-Dope reducer and applied with a spray gun to avoid brush marks and cut application.



PART#	SIZE
PLY-BRSH-QT/UNT	QUART
PLY-BRSH-QT/UNT	GALLON

POLY SPRAY

A high solids aluminum pigmented, 1 part, air drying resin used after the Poly-Brush preliminary coating to protect the fabric from ultraviolet light and quickly fill the fabric wave in preparation for a smooth finish. Poly-Spray is applied with a spray gun with no further thinning needed under normal conditions.



PART#	SIZE
PLY-SPRY-QT	QUART
PLY-SPRY-GAL	GALLON
PLY-SPRY-5GAL	5 GALLON

FINISHING: METAL, FABRIC, & PAINT

REDUCER R65-75

A blend of solvents used for viscosity and drying control of Poly-Brush, Poly-Spray, and Poly-Tone.



PART#	SIZE
R65-75-QT	QUART
R65-75-GAL	GALLON
R65-75-5GAL	5 GALLON

RETARDER RR-8500

Slower drying time reducer is recommended for temperatures above 85 degrees F. and warm humid weather.



PART#	SIZE
RR8500-QT	QUART
RR8500-GAL	GALLON

EPOXY METAL PRIMER

Corrosion inhibiting, fast drying, heavy duty chemical & solvent resistant amine cured primer. Application and curing in temperatures down to 35 degrees F.



PART#	SIZE	COLOR
EP420-QT	QUART	WHITE
EP420-G	GALLON	WHITE
EP420-QT/GR	QUART	GREEN
EP420-GAL/GR	GALLON	GREEN

EPOXY PRIMER CATALYST

Catalyst for the EP420 primer.



PART#	SIZE
EP430-PT	PINT
EP430-QT	QUART

EPOXY SPAR VARNISH

A polyamide cured epoxy wood varnish, providing good chemical and solvent resistance. Weather durability will be equal or superior to any one component varnish.



PART#	SIZE
EV400-QT	QUART
EV400-GAL	GALLON

EPOXY VARNISH CATALYST

Catalyst for EV400 Epoxy Spar Varnish.



PART#	SIZE
EV410-PT	PINT
EV410-QT	QUART

EPOXY REDUCER

A blend of solvents for use in EP420 primer and EV400 varnish.



PART#	SIZE
E500-QT	QUART
E500-GAL	GALLON

EPOXY ACCELERATOR

For use with EP420 primer and EV400 varnish.



PART#	SIZE
EX501-1/2PT	PINT

REJUVENATOR RJ1200

Refinishing preparation for Stits polydope coatings. Rejuvenates by penetration of the slow solvents which carry the new plasticizers into the old coating film.

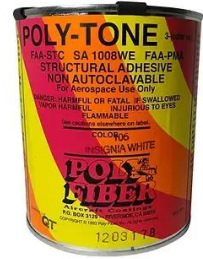


PART#	SIZE
RJ-1200-QT	QUART
RJ-1200-GAL	GALLON

FINISHING: METAL, FABRIC, & PAINT

POLY-TONE

A durable, high gloss, 1 part, air drying flexible paint. Recommended as the standard finish for the Poly-Fiber cover process. Also may be used over suitable primed metal components of fabric covered aircraft. Fabric damage is more easily repaired and refinished to blend the repair when Polytone finish is used. All pigments are non-bleeding or fading. Will not oxidize with age. Polytone is manufactured in the correct viscosity for spray gun application in normal conditions. Coverage: 1 gallon 200 square feet with one good cross coat. Thin with R65-75 reducer.

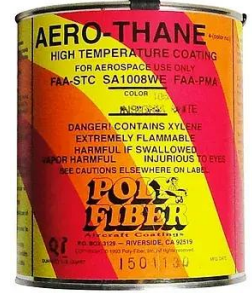


PART#	COLOR	SIZE	PART#	COLOR	SIZE
PT105-QT	INSIGNIA WHITE	QUART	PT190-QT	TENNESSEE RED	QUART
PT105-G	INSIGNIA WHITE	GALLON	PT190-G	TENNESSEE RED	GALLON
PT110-QT	JUNEAU WHITE	QUART	PT191-QT	PONTIAC RED	QUART
PT110-G	JUNEAU WHITE	GALLON	PT191-G	PONTIAC RED	GALLON
PT117-QT	GLACIER WHITE	QUART	PT195-QT	SANTA FE RED	QUART
PT117-G	GLACIER WHITE	GALLON	PT195-G	SANTA FE RED	GALLON
PT120-QT	DAYTONA WHITE	QUART	PT196-QT	BOSTON MAROON	QUART
PT120-G	DAYTONA WHITE	GALLON	PT196-G	BOSTON MAROON	GALLON
PT125-QT	TUCSON CREAM	QUART	PT197-QT	STINSON MAROON	QUART
PT125-G	TUCSON CREAM	GALLON	PT197-G	STINSON MAROON	GALLON
PT131-QT	DIANA CREAM	QUART	PT203-QT	ELSINORE BROWN	QUART
PT131-G	DIANA CREAM	GALLON	PT203-G	ELSINORE BROWN	GALLON
PT132-QT	SUN VALLEY IVORY	QUART	PT205-QT	BERMUDA TAN	QUART
PT132-G	SUN VALLEY IVORY	GALLON	PT205-G	BERMUDA TAN	GALLON
PT136-QT	LEMON YELLOW	QUART	PT208-QT	OLIVE DRAB	QUART
PT136-G	LEMON YELLOW	GALLON	PT208-G	OLIVE DRAB	GALLON
PT139-QT	FEDERAL YELLOW	QUART	PT208A-QT	FEDERAL GREEN	QUART
PT139-G	FEDERAL YELLOW	GALLON	PT208A-G	FEDERAL GREEN	GALLON
PT140-QT	ORANGE YELLOW	QUART	PT210-QT	POLAR GRAY	QUART
PT140-G	ORANGE YELLOW	GALLON	PT210-G	POLAR GRAY	GALLON
PT142A-QT	EAGLE YELLOW ORANGE	QUART	PT212-QT	AG CAT GRAY	QUART
PT142A-G	EAGLE YELLOW ORANGE	GALLON	PT212-G	AG CAT GRAY	GALLON
PT143-QT	CUB YELLOW	QUART	PT213-QT	FEDERAL GRAY	QUART
PT143-G	CUB YELLOW	GALLON	PT213-G	FEDERAL GRAY	GALLON
PT145-QT	LOCKHAVEN YELLOW	QUART	PT215-QT	DAKOTA BLACK	QUART
PT145-G	LOCKHAVEN YELLOW	GALLON	PT215-G	DAKOTA BLACK	GALLON
PT146-QT	J3 OEM YELLOW	QUART	PT219-QT	JASPER GRAY	QUART
PT146-G	J3 OEM YELLOW	GALLON	PT219-G	JASPER GRAY	GALLON
PT151-QT	EVERGLADES GREEN	QUART	PT220M-QT	NEVADA SILVER	QUART
PT151-G	EVERGLADES GREEN	GALLON	PT220M-G	NEVADA SILVER	GALLON
PT156-QT	PORTLAND GREEN	QUART	PT222M-QT	RANCHO SILVER	QUART
PT156-G	PORTLAND GREEN	GALLON	PT222M-G	RANCHO SILVER	GALLON
PT157-QT	CUBY SPORT TR GREEN	QUART	PT240-QT	CHAMPION YELLOW	QUART
PT157-G	CUBY SPORT TR GREEN	GALLON	PT240-G	CHAMPION YELLOW	GALLON
PT160-QT	FOREST GREEN	QUART	PT242-QT	AG CAT YELLOW	QUART
PT160-G	FOREST GREEN	GALLON	PT242-G	AG CAT YELLOW	GALLON
PT165-QT	LAKELAND BLUE	QUART	PT301M-QT	RENO GOLD	QUART
PT165-G	LAKELAND BLUE	GALLON	PT301M-G	RENO GOLD	GALLON
PT170-QT	BAHAMA BLUE	QUART	PT318M-QT	PIPER TRAINER BLUE	QUART
PT170-G	BAHAMA BLUE	GALLON	PT318M-G	PIPER TRAINER BLUE	GALLON
PT173-QT	TRUE BLUE	QUART	PT350-QT	RAINBOW PURPLE	QUART
PT173-G	TRUE BLUE	GALLON	PT350-G	RAINBOW PURPLE	GALLON
PT176-QT	INSIGNIA BLUE	QUART	PT361-QT	EAGLE PURPLE	QUART
PT176-G	INSIGNIA BLUE	GALLON	PT361-G	EAGLE PURPLE	GALLON
PT177-QT	EAGLE BLUE	QUART			
PT177-G	EAGLE BLUE	GALLON			
PT180-QT	CRUISER ORANGE	QUART			
PT180-G	CRUISER ORANGE	GALLON			
PT182-QT	PUMPKIN ORANGE	QUART			
PT182-G	PUMPKIN ORANGE	GALLON			
PT183-QT	INTERNATIONAL ORANGE	QUART			
PT183-G	INTERNATIONAL ORANGE	GALLON			
PT187-QT	EAGLE ORANGE	QUART			
PT187-G	EAGLE ORANGE	GALLON			
PT189-QT	MADRID RED	QUART			
PT189-G	MADRID RED	GALLON			

FINISHING: METAL, FABRIC, & PAINT

AEROTHANE

Provides excellent solvent, chemical, abrasion and weather resistance. A tough, flexible, high gloss two part polyurethane enamel formulated especially for fabric covered aircraft surfaces and marine surfaces subjected to flexing loads. Recommended as a premium quality, high gloss fabric finish over Stits POLY-FIBER Covering Materials, and all primed metal and fiberglass components of fabric covered aircraft. May also be used to refinish suitably rejuvenated nitrate or butyrate dope fabric surfaces and sound synthetic enamel on fabric and metal surfaces. All cracked, peeling or brittle synthetic enamel finish should be removed. Colors filled to 3/4 full. Order U865 catalyst separately.



PART#	COLOR	SIZE	PART#	COLOR	SIZE
AO105-QT	INSIGNIA WHITE	QUART	AO190-QT	TENNESSEE RED	QUART
AO105-G	INSIGNIA WHITE	GALLON	AO190-G	TENNESSEE RED	GALLON
AO110-QT	JUNEAU WHITE	QUART	AO191-QT	PONTIAC RED	QUART
AO110-G	JUNEAU WHITE	GALLON	AO191-G	PONTIAC RED	GALLON
AO117-QT	GLACIER WHITE	QUART	AO195-QT	SANTA FE RED	QUART
AO117-G	GLACIER WHITE	GALLON	AO195-G	SANTA FE RED	GALLON
AO120-QT	DAYTONA WHITE	QUART	AO196-QT	BOSTON MAROON	QUART
AO120-G	DAYTONA WHITE	GALLON	AO196-G	BOSTON MAROON	GALLON
AO125-QT	TUCSON CREAM	QUART	AO197-QT	STINSON MAROON	QUART
AO125-G	TUCSON CREAM	GALLON	AO197-G	STINSON MAROON	GALLON
AO131-QT	DIANA CREAM	QUART	AO203-QT	ELSINORE BROWN	QUART
AO131-G	DIANA CREAM	GALLON	AO203-G	ELSINORE BROWN	GALLON
AO132-QT	SUN VALLEY IVORY	QUART	AO205-QT	BERMUDA TAN	QUART
AO132-G	SUN VALLEY IVORY	GALLON	AO205-G	BERMUDA TAN	GALLON
AO136-QT	LEMON YELLOW	QUART	AO208-QT	OLIVE DRAB	QUART
AO136-G	LEMON YELLOW	GALLON	AO208-G	OLIVE DRAB	GALLON
AO139-QT	FEDERAL YELLOW	QUART	AO208A-QT	FEDERAL GREEN	QUART
AO139-G	FEDERAL YELLOW	GALLON	AO208A-G	FEDERAL GREEN	GALLON
AO140-QT	ORANGE YELLOW	QUART	AO210-QT	POLAR GRAY	QUART
AO140-G	ORANGE YELLOW	GALLON	AO210-G	POLAR GRAY	GALLON
AO142A-QT	EAGLE YELLOW ORANGE	QUART	AO212-QT	AG CAT GRAY	QUART
AO142A-G	EAGLE YELLOW ORANGE	GALLON	AO212-G	AG CAT GRAY	GALLON
AO143-QT	CUB YELLOW	QUART	AO213-QT	FEDERAL GRAY	QUART
AO143-G	CUB YELLOW	GALLON	AO213-G	FEDERAL GRAY	GALLON
AO145-QT	LOCKHAVEN YELLOW	QUART	AO215-QT	DAKOTA BLACK	QUART
AO145-G	LOCKHAVEN YELLOW	GALLON	AO215-G	DAKOTA BLACK	GALLON
AO146-QT	J3 OEM YELLOW	QUART	AO219-QT	JASPER GRAY	QUART
AO146-G	J3 OEM YELLOW	GALLON	AO219-G	JASPER GRAY	GALLON
AO151-QT	EVERGLADES GREEN	QUART	AO220M-QT	NEVADA SILVER	QUART
AO151-G	EVERGLADES GREEN	GALLON	AO220M-G	NEVADA SILVER	GALLON
AO156-QT	PORTLAND GREEN	QUART	AO222M-QT	RANCHO SILVER	QUART
AO156-G	PORTLAND GREEN	GALLON	AO222M-G	RANCHO SILVER	GALLON
AO157-QT	CUBY SPORT TR GREEN	QUART	AO240-QT	CHAMPION YELLOW	QUART
AO157-G	CUBY SPORT TR GREEN	GALLON	AO240-G	CHAMPION YELLOW	GALLON
AO160-QT	FOREST GREEN	QUART	AO242-QT	AG CAT YELLOW	QUART
AO160-G	FOREST GREEN	GALLON	AO242-G	AG CAT YELLOW	GALLON
AO165-QT	LAKELAND BLUE	QUART	AO301M-QT	RENO GOLD	QUART
AO165-G	LAKELAND BLUE	GALLON	AO301M-G	RENO GOLD	GALLON
AO170-QT	BAHAMA BLUE	QUART	AO318M-QT	PIPER TRAINER BLUE	QUART
AO170-G	BAHAMA BLUE	GALLON	AO318M-G	PIPER TRAINER BLUE	GALLON
AO173-QT	TRUE BLUE	QUART	AO350-QT	RAINBOW PURPLE	QUART
AO173-G	TRUE BLUE	GALLON	AO350-G	RAINBOW PURPLE	GALLON
AO176-QT	INSIGNIA BLUE	QUART	AO361-QT	EAGLE PURPLE	QUART
AO176-G	INSIGNIA BLUE	GALLON	AO361-G	EAGLE PURPLE	GALLON
AO177-QT	EAGLE BLUE	QUART			
AO177-G	EAGLE BLUE	GALLON			
AO180-QT	CRUISER ORANGE	QUART			
AO180-G	CRUISER ORANGE	GALLON			
AO182-QT	PUMPKIN ORANGE	QUART			
AO182-G	PUMPKIN ORANGE	GALLON			
AO183-QT	INTERNATIONAL ORANGE	QUART			
AO183-G	INTERNATIONAL ORANGE	GALLON			
AO187-QT	EAGLE ORANGE	QUART			
AO187-G	EAGLE ORANGE	GALLON			
AO189-QT	MADRID RED	QUART			
AO189-G	MADRID RED	GALLON			

FINISHING: METAL, FABRIC, & PAINT

URETHANE RETARDER

Solvent blend used in Aerothane and UV-550 to retard the surface drying time. Use as directed on container.



PART#	SIZE
UR826-QT	QUART
UR826-GAL	GALLON

URETHANE REDUCER

Solvent blend used in Aerothane and UV-550 varnish for good flow in warm weather to avoid orange peel finish.



PART#	SIZE
UE820-QT	QUART
UE820-GAL	GALLON

URETHANE CATALYST

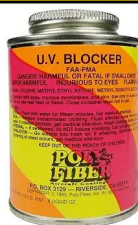
Catalyst for Aerothane.



PART#	SIZE
U865-1/2PT	1/2 PINT
U865-QT	QUART

POLYTONE UV BLOCK

1/2 pint can, blocks 8 quarts or 2 gallons of Polytone.



PART#	SIZE
UV-1/2PT	1/2 PINT

AEROTHANE CLEAR POLYURETHANE

Refinishing preparation for STITS polydope coatings. Rejuvenates by penetration of the slow solvents which carry the new plasticizers into the old coating film.



PART#	SIZE
AO-100-QT	QUART
AO-100-GAL	GALLON

POLYFIBER PRACTICE/REPAIR KIT

Kit consists of a reusable wooden frame, a yard of P-103 fabric and enough dope to cover the frame at least two times, brushes and sandpaper. A calibrating thermometer is included to teach the skill of proper heat tautening- a key ingredient to the Poly-Fiber system. An introduction Poly-Fiber covering and painting manual is included in the kit as a reference, but the instructions are also summarized in a three-page leaflet making fast work of the steps in the process. Ideal for small repairs.



PART#
PFK-001

FINISHING: METAL, FABRIC, & PAINT

NON-TAUTENING BUTYRATE DOPE

This formula has a slight increase in plasticizer and will not continue to tauten excessively. Longer drying time between each coat is required. Non-tinted is clear. Tinted is tan in color.



PART#	SIZE	TYPE
W8350-QT	QUART	TINTED
W8350-G	GALLON	TINTED
W8350-5G	5 GALLON	TINTED
A1690-QT	QUART	NON-TINTED
A1690-G	GALLON	NON-TINTED

CLEAR BUTYRATE DOPE

All purpose dope proprietary formulated contains high total solids. Normally considered one of the best dopes for finishing fabric because of its slower curing rate, butyrate dope can be used on cotton or linen fabric over nitrate dope for good tautening and filling.



PART#	SIZE
9701-QT	QUART
9701-G	GALLON
9701-5G	5 GALLON

BUTYRATE THINNER/REDUCER

For use with butyrate dope formulations, an active blend of solvents used to reduce the viscosity.



PART#	SIZE
9703-QT	QUART
9703-G	GALLON
9703-5G	5 GALLON

NON-TAUTENING NITRATE DOPE

Specially formulated for first coat on Ceconite polyester fabric. It is also used for finishing tapes. G6302 is green, W7868 is Blue, & E4964 is clear.



PART#	SIZE	COLOR
G6302-QT	QUART	GREEN
G6302-G	GALLON	GREEN
G6302-5G	5 GALLON	GREEN
W7868-QT	QUART	BLUE
W7868-G	GALLON	BLUE
W7868-5G	5 GALLON	BLUE
E4964-QT	QUART	CLEAR
E4964-G	GALLON	CLEAR
E4964-5G	5 GALLON	CLEAR

CLEAR NITRATE DOPE

Proprietary formulation containing high solids. Good durability, good fill and fast pull-up. Because of its better encapsulating properties, may be used to advantage for first coat. Thin with 286 nitrate thinner 1 to 1 ratio.



PART#	SIZE
210-QT	QUART
210-G	GALLON
210-5G	5 GALLON

NITRATE THINNER/REDUCER

Thinner for nitrate dope, has very good blush retarding action.



PART#	SIZE
286-QT	QUART
286-G	GALLON
286-5G	5 GALLON

BUTYSOLV REJUVENATOR

A mixture of solvents and plasticizers designed to soften, rejuvenate, and revitalize old butyrate dope finishes on fabric-covered surfaces. Thin with #9703 butyrate thinner: 2 parts butysolv to 3 parts #9703.



PART#	SIZE
J3000-QT	QUART
J3000-G	GALLON
J3000-5G	5 GALLON

RAND-O-FILL

Non-tautening material designed for spray build up over either nitrate or butyrate clear dope and provides protection against ultraviolet rays that damage the fibers of the cloth. Thin as needed with butyrate thinner #9703. Used as a fill coat, wet sand after completely dry.



PART#	SIZE
G6303-QT	QUART
G6303-G	GALLON
G6303-5G	5 GALLON

UNIVERSAL RETARDER

Is a mixture of slow evaporating solvents that may be used with either Butyrate dope or Nitrate dope. Recommended to prevent blush in high humidity. Also aids in leveling and gloss enhancement when used in final color coats.



PART#	SIZE
Y9910-QT	QUART
Y9910-G	GALLON
Y9910-5G	5 GALLON

FINISHING: METAL, FABRIC, & PAINT

RAND-O-PLATE EPOXY PRIMER

Is a component primer for metal, dark green in color, an excellent undercoat for dark range of colors. (Same formulation as Epibond). Use 2 to 1 parts mixing liquid EP 430.



PART#	SIZE
B6433-QT	QUART
B6433-G	GALLON

EPIBOND EPOXY PRIMER

(Dope proof) is a two-component primer for metal surfaces. Off-white in color, an excellent base coat under white or light colored combinations. Use with 1 part of mixing liquid EP430. 2 to 1 ratio.



PART#	SIZE
W2248-QT	QUART
W2248-G	GALLON

ACID PROOF PAINT

Acid-proof black paint. Reduce with thinner #286. For use on metal surfaces next to battery.



PART#	SIZE
345-QT	QUART

SUPER SEAM CEMENT

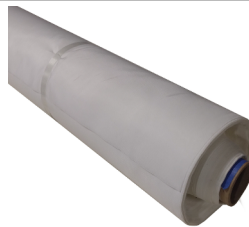
New, improved clear formulation offers twice the peel strength of the original. Used to cement fabric and attach fabric to airframe with no speed restrictions. Compatible with all Randolph dopes. Dries in 15-30 minutes with no thinning. If thinning is necessary, thin with MEK.



PART#	SIZE
CSSQT	QUART

CECONITE FABRIC

C-101-3 and C-102-3 are certified. Light-17 is noncertified. Weight is per square yard. Sold by the yard. 72" wide.



PART#	WEIGHT
LIGHT-17	1.87 oz
C-102-3	3.16 oz
C-101-3	3.50 oz

CECONITE STRAIGHT TAPE

Straight Ceconite tape in various widths.



PART#	WEIGHT	LENGTH	WIDTH
CEC-1	2.7 oz	50 yd	1"
CEC-2	2.7 oz	50 yd	2"
CEC-3	2.7 oz	50 yd	3"
CEC-4	2.7 oz	50 yd	4"

CECONIT PINKED TAPE

Pinked Ceconite tape in various widths.



PART#	WEIGHT	TYPE
HT104-1	1.7	PINKED
HT104-1.5	1.7	PINKED
HT104-2	1.7	PINKED
HT104-3	1.7	PINKED
HT104-4	1.7	PINKED
HT104-6	1.7	PINKED
LT-P-1	2.7	PINKED
LT-P-1-1/2	2.7	PINKED
LT-P-2	2.7	PINKED
LT-P-3	2.7	PINKED
LT-P-4	2.7	PINKED
LT-P-6	2.7	PINKED
HT102-2BS	2.7	PINKED BIAS
HT102-3BS	2.7	PINKED BIAS
HT102-4BS	2.7	PINKED BIAS

SEWING THREAD

Machine or hand sewing thread. 500 yds per roll. Use machine thread to sew your own envelopes or partial envelopes if sewing machine can handle. Use hand sewing thread when cemented seams won't work such as no structure under the seam.



PART#	TYPE
D207	HAND
D69	MACHINE

REINFORCING TAPES

Three widths available. Reinforcing tape is an adhesive-backed polyester twill materials that is attached to the fabric over the rib cap before rib lacing. It reinforces the fabric so that rib laces, screws or rivets don't cut through the fabric when mechanical attachments are snugged down. Use the width of tape that exactly matches the width of your rib cap. Use two parallel 1/2" tapes to cover a 1" rib.



PART#	SIZE	LENGTH
RT-1/4	1/4"	50 Yards
RT-3/8	3/8"	50 Yards
RT-1/2	1/2"	50 Yards

FINISHING: METAL, FABRIC, & PAINT

BUTYRATE COLORS

Non tautening color butyrate dope is to be used on fabric only.
All-purpose Butyrate dope should be sprayed, never brushed.
Thin with equal parts of butyrate thinner 9703.



PART#	COLOR	SIZE	PART#	COLOR	SIZE
Q-1050APB-QT	NEW INSIGNIA WHITE	QUART	E-6428APB-QT	AERONCA 7AC ORANGE	QUART
Q-1050APB-G	NEW INSIGNIA WHITE	GALLON	E-6428APB-G	AERONAC 7AC ORANGE	GALLON
Q-1916APB-QT	RANDOLPH WHITE	QUART	M-9526APB-QT	CRUISER ORANGE	QUART
Q-1916APB-G	RANDOLPH WHITE	GALLON	M-9526APB-G	CRUISER ORANGE	GALLON
B-4243APB-QT	JUNEAU WHITE	QUART	P-8600APB-QT	CESSNA TIGER ORANGE	QUART
B-4243APB-G	JUNEAU WHITE	GALLON	P-8600APB-G	CESSNA TIGER ORANGE	GALLON
J-9545APB-QT	DAYTONA WHITE	QUART	C-2065APB-QT	OCALA ORANGE	QUART
J-9545APB-G	DAYTONA WHITE	GALLON	C-2065APB-G	OCALA ORANGE	GALLON
K-7641APB-QT	VESTAL WHITE	QUART	B-3534APB-QT	MADRID RED	QUART
K-7641APB-G	VESTAL WHITE	GALLON	B-3534APB-G	MADRID RED	GALLON
W-9170APB-QT	TROPIC WHITE	QUART	W-3665APB-QT	PONTIAC RED	QUART
W-9170APB-G	TROPIC WHITE	GALLON	W-3665APB-G	PONTIAC RED	GALLON
X-5260APB-QT	TUSCON CREAM	QUART	M-9530APB-QT	VERMILLION RED	QUART
X-5260APB-G	TUSCON CREAM	GALLON	M-9530APB-G	VERMILLION RED	GALLON
M-9518APB-QT	DIANA CREAM	QUART	B-9163APB-QT	COLORADO RED	QUART
M-9518APB-G	DIANA CREAM	GALLON	B-9163APB-G	COLORADO RED	GALLON
Z-7245APB-QT	SUN VALLEY IVORY	QUART	M-9522APB-QT	TENNESSEE RED	QUART
Z-7245APB-G	SUN VALLEY IVORY	GALLON	M-9522APB-G	TENNESSEE RED	GALLON
R-8175APB-QT	SANDALWOOD	QUART	J-9555APB-QT	CADILLAC RED	QUART
R-8175APB-G	SANDALWOOD	GALLON	J-9555APB-G	CADILLAC RED	GALLON
Y-9775APB-QT	HICKORY BROWN	QUART	H-9150APB-QT	SANTA FE RED	QUART
Y-9775APB-G	HICKORY BROWN	GALLON	A-9150APB-G	SANTA FE RED	GALLON
R-8174APB-QT	PLATINUM GRAY	QUART	X-5680APB-QT	BOSTON MAROON	QUART
R-8174APB-G	PLATINUM GRAY	GALLON	X-5680APB-G	BOSTON MAROON	GALLON
F-7790APB-QT	AG CAT GRAY	QUART	X-5749APB-QT	STINSON MAROON	QUART
F-7790APB-G	AG CAT GRAY	GALLON	X-5749APB-G	STINSON MAROON	GALLON
Y-6100APB-QT	POLAR GRAY	QUART	W-3554APB-QT	LAKELAND BLUE	QUART
Y-6100APB-G	POLAR GRAY	GALLON	W-3554APB-G	LAKELAND BLUE	GALLON
R-4870APB-QT	NEUTRAL GRAY	QUART	H-9170APB-QT	BAHAMA BLUE	QUART
R-4870APB-G	NEUTRAL GRAY	GALLON	H-9170APB-G	BAHAMA BLUE	GALLON
M-9514APB-QT	METALLIC SILVER	QUART	W-8430APB-QT	NEWPORT METALLIC BLUE	QUART
M-9514APB-G	METALLIC SILVER	GALLON	W-8430APB-G	NEWPORT METALLIC BLUE	GALLON
H-6117APB-QT	BLACK	QUART	X-5700APB-QT	MIAMI BLUE	QUART
H-6117APB-G	BLACK	GALLON	X-5700APB-G	MIAMI BLUE	GALLON
B-9916APB-QT	RENO GOLD	QUART	W-9506APB-QT	AN TRUE BLUE	QUART
B-9916APB-G	RENO GOLD	GALLON	W-9506APB-G	AN TRUE BLUE	GALLON
R-4869APB-QT	OLIVE DRAB	QUART	M-9502APB-QT	INSIGNIA BLUE	QUART
R-4869APB-G	OLIVE DRAB	GALLON	M-9502APB-G	INSIGNIA BLUE	GALLON
F-2406APB-QT	FEDERAL GREEN	QUART	Y-6350APB-QT	FOREST GREEN	QUART
F-2406APB-G	FEDERAL GREEN	GALLON	Y-6350APB-G	FOREST GREEN	GALLON
M-9512APB-QT	LEMON YELLOW	QUART	F-5830APB-QT	MONTEGO GREEN	QUART
M-9512APB-G	LEMON YELLOW	GALLON	F-5830APB-G	MONTEGO GREEN	GALLON
D-9270APB-QT	AG CAT YELLOW	QUART	W-8427APB-QT	TAMPA GREEN	QUART
D-9270APB-G	AG CAT YELLOW	GALLON	W-8427APB-G	TAMPA GREEN	GALLON
M-9501APB-QT	AN ORANGE YELLOW	QUART			
M-9501APB-G	AN ORANGE YELLOW	GALLON			
E-6427APB-QT	AERONCA 7AC YELLOW	QUART			
E-6427APB-G	AERONCA 7AC YELLOW	GALLON			
F-6285APB-QT	CUB J3 YELLOW	QUART			
F-6285APB-G	CUB J3 YELLOW	GALLON			
Y-5783APB-QT	DALLAS YELLOW	QUART			
Y-5783APB-G	DALLAS YELLOW	GALLON			
N-3353APB-QT	FEDERAL YELLOW	QUART			
N-3353APB-G	FEDERAL YELLOW	GALLON			
M-9521APB-QT	LOCKHAVEN YELLOW	QUART			
M-9521APB-G	LOCKHAVEN YELLOW	GALLON			

FINISHING: METAL, FABRIC, & PAINT

ENAMEL COLORS

For use over primed treated substrates such as alclad aluminum, steel, fiberglass and wood. These enamels have typical enamel characteristics such as a longer drying time between coats and masking. They dry dust free in under 1 hour but should not be masked for trim in under 48 hours. Enamels show full luster, good color retention and excellent flight proven durability. Thin with 257 enamel reducer.



PART#	COLOR	SIZE	PART#	COLOR	SIZE
Q-1050E-QT	NEW INSIGNIA WHITE	QUART	E-6428E-QT	AERONCA 7AC ORANGE	QUART
Q-1050E-G	NEW INSIGNIA WHITE	GALLON	E-6428E-G	AERONAC 7AC ORANGE	GALLON
Q-1916E-QT	RANDOLPH WHITE	QUART	M-9526E-QT	CRUISER ORANGE	QUART
Q-1916E-G	RANDOLPH WHITE	GALLON	M-9526E-G	CRUISER ORANGE	GALLON
B-4243E-QT	JUNEAU WHITE	QUART	P-8600E-QT	CESSNA TIGER ORANGE	QUART
B-4243E-G	JUNEAU WHITE	GALLON	P-8600E-G	CESSNA TIGER ORANGE	GALLON
J-9545E-QT	DAYTONA WHITE	QUART	C-2065E-QT	OCALA ORANGE	QUART
J-9545E-G	DAYTONA WHITE	GALLON	C-2065E-G	OCALA ORANGE	GALLON
K-7641E-QT	VESTAL WHITE	QUART	B-3534E-QT	MADRID RED	QUART
K-7641E-G	VESTAL WHITE	GALLON	B-3534E-G	MADRID RED	GALLON
W-9170E-QT	TROPIC WHITE	QUART	W-3665E-QT	PONTIAC RED	QUART
W-9170E-G	TROPIC WHITE	GALLON	W-3665E-G	PONTIAC RED	GALLON
X-5260E-QT	TUSCON CREAM	QUART	M-9530E-QT	VERMILLION RED	QUART
X-5260E-G	TUSCON CREAM	GALLON	M-9530E-G	VERMILLION RED	GALLON
M-9518E-QT	DIANA CREAM	QUART	B-9163E-QT	COLORADO RED	QUART
M-9518E-G	DIANA CREAM	GALLON	B-9163E-G	COLORADO RED	GALLON
Z-7245E-QT	SUN VALLEY IVORY	QUART	M-9522E-QT	TENNESSEE RED	QUART
Z-7245E-G	SUN VALLEY IVORY	GALLON	M-9522E-G	TENNESSEE RED	GALLON
R-8175E-QT	SANDALWOOD	QUART	J-9555E-QT	CADILLAC RED	QUART
R-8175E-G	SANDALWOOD	GALLON	J-9555E-G	CADILLAC RED	GALLON
Y-9775E-QT	HICKORY BROWN	QUART	H-9150E-QT	SANTA FE RED	QUART
Y-9775E-G	HICKORY BROWN	GALLON	A-9150E-G	SANTA FE RED	GALLON
R-8174E-QT	PLATINUM GRAY	QUART	X-5680E-QT	BOSTON MAROON	QUART
R-8174E-G	PLATINUM GRAY	GALLON	X-5680E-G	BOSTON MAROON	GALLON
F-7790E-QT	AG CAT GRAY	QUART	X-5749E-QT	STINSON MAROON	QUART
F-7790E-G	AG CAT GRAY	GALLON	X-5749E-G	STINSON MAROON	GALLON
Y-6100E-QT	POLAR GRAY	QUART	W-3554E-QT	LAKELAND BLUE	QUART
Y-6100E-G	POLAR GRAY	GALLON	W-3554E-G	LAKELAND BLUE	GALLON
R-4870E-QT	NEUTRAL GRAY	QUART	H-9170E-QT	BAHAMA BLUE	QUART
R-4870E-G	NEUTRAL GRAY	GALLON	H-9170E-G	BAHAMA BLUE	GALLON
M-9514E-QT	METALLIC SILVER	QUART	W-8430E-QT	NEWPORT METALLIC BLUE	QUART
M-9514E-G	METALLIC SILVER	GALLON	W-8430E-G	NEWPORT METALLIC BLUE	GALLON
H-6117E-QT	BLACK	QUART	X-5700E-QT	MIAMI BLUE	QUART
H-6117E-G	BLACK	GALLON	X-5700E-G	MIAMI BLUE	GALLON
B-9916E-QT	RENO GOLD	QUART	W-9506E-QT	AN TRUE BLUE	QUART
B-9916E-G	RENO GOLD	GALLON	W-9506E-G	AN TRUE BLUE	GALLON
R-4869E-QT	OLIVE DRAB	QUART	M-9502E-QT	INSIGNIA BLUE	QUART
R-4869E-G	OLIVE DRAB	GALLON	M-9502E-G	INSIGNIA BLUE	GALLON
F-2406E-QT	FEDERAL GREEN	QUART	Y-6350E-QT	FOREST GREEN	QUART
F-2406E-G	FEDERAL GREEN	GALLON	Y-6350E-G	FOREST GREEN	GALLON
M-9512E-QT	LEMON YELLOW	QUART	F-5830E-QT	MONTEGO GREEN	QUART
M-9512E-G	LEMON YELLOW	GALLON	F-5830E-G	MONTEGO GREEN	GALLON
D-9270E-QT	AG CAT YELLOW	QUART	W-8427E-QT	TAMPA GREEN	QUART
D-9270E-G	AG CAT YELLOW	GALLON	W-8427E-G	TAMPA GREEN	GALLON
M-9501E-QT	AN ORANGE YELLOW	QUART			
M-9501E-G	AN ORANGE YELLOW	GALLON			
E-6427E-QT	AERONCA 7AC YELLOW	QUART			
E-6427E-G	AERONCA 7AC YELLOW	GALLON			
F-6285E-QT	CUB J3 YELLOW	QUART			
F-6285E-G	CUB J3 YELLOW	GALLON			
Y-5783E-QT	DALLAS YELLOW	QUART			
Y-5783E-G	DALLAS YELLOW	GALLON			
N-3353E-QT	FEDERAL YELLOW	QUART			
N-3353E-G	FEDERAL YELLOW	GALLON			
M-9521E-QT	LOCKHAVEN YELLOW	QUART			
M-9521E-G	LOCKHAVEN YELLOW	GALLON			

FINISHING: METAL, FABRIC, & PAINT

RANTHANE HIGH SOLIDS POLYURETHANE

New 2nd generation two-part Randolph polyurethane combines ease of application with excellent hiding qualities, chemical resistance, flexibility, and durability. Spraying properties are excellent with good leveling, flow out, and absence of texturing or orange peel. CATALYST is ordered separately. Use catalyst part number: AUCAT-PT (pint), -QT (quart) or -GAL (gallon). Mixture ratio: 2 parts color to 1 part catalyst. Reduce with G4200. Pot life: around 6 hours. Full cure: 8 days.



PART#	COLOR	SIZE	PART#	COLOR	SIZE
Q-1050AU-QT	NEW INSIGNIA WHITE	QUART	E-6428AU-QT	AERONCA 7AC ORANGE	QUART
Q-1050AU-G	NEW INSIGNIA WHITE	GALLON	E-6428AU-G	AERONAC 7AC ORANGE	GALLON
Q-1916AU-QT	RANDOLPH WHITE	QUART	M-9526AU-QT	CRUISER ORANGE	QUART
Q-1916AU-G	RANDOLPH WHITE	GALLON	M-9526AU-G	CRUISER ORANGE	GALLON
B-4243AU-QT	JUNEAU WHITE	QUART	P-8600AU-QT	CESSNA TIGER ORANGE	QUART
B-4243AU-G	JUNEAU WHITE	GALLON	P-8600AU-G	CESSNA TIGER ORANGE	GALLON
J-9545AU-QT	DAYTONA WHITE	QUART	C-2065AU-QT	OCALA ORANGE	QUART
J-9545AU-G	DAYTONA WHITE	GALLON	C-2065AU-G	OCALA ORANGE	GALLON
K-7641AU-QT	VESTAL WHITE	QUART	B-3534AU-QT	MADRID RED	QUART
K-7641AU-G	VESTAL WHITE	GALLON	B-3534AU-G	MADRID RED	GALLON
W-9170AU-QT	TROPIC WHITE	QUART	W-3665AU-QT	PONTIAC RED	QUART
W-9170AU-G	TROPIC WHITE	GALLON	W-3665AU-G	PONTIAC RED	GALLON
X-5260AU-QT	TUSCON CREAM	QUART	M-9530AU-QT	VERMILLION RED	QUART
X-5260AU-G	TUSCON CREAM	GALLON	M-9530AU-G	VERMILLION RED	GALLON
M-9518AU-QT	DIANA CREAM	QUART	B-9163AU-QT	COLORADO RED	QUART
M-9518AU-G	DIANA CREAM	GALLON	B-9163AU-G	COLORADO RED	GALLON
Z-7245AU-QT	SUN VALLEY IVORY	QUART	M-9522AU-QT	TENNESSEE RED	QUART
Z-7245AU-G	SUN VALLEY IVORY	GALLON	M-9522AU-G	TENNESSEE RED	GALLON
R-8175AU-QT	SANDALWOOD	QUART	J-9555AU-QT	CADILLAC RED	QUART
R-8175AU-G	SANDALWOOD	GALLON	J-9555AU-G	CADILLAC RED	GALLON
Y-9775AU-QT	HICKORY BROWN	QUART	H-9150AU-QT	SANTA FE RED	QUART
Y-9775AU-G	HICKORY BROWN	GALLON	A-9150AU-G	SANTA FE RED	GALLON
R-8174AU-QT	PLATINUM GRAY	QUART	X-5680AU-QT	BOSTON MAROON	QUART
R-8174AU-G	PLATINUM GRAY	GALLON	X-5680AU-G	BOSTON MAROON	GALLON
F-7790AU-QT	AG CAT GRAY	QUART	X-5749AU-QT	STINSON MAROON	QUART
F-7790AU-G	AG CAT GRAY	GALLON	X-5749AU-G	STINSON MAROON	GALLON
Y-6100AU-QT	POLAR GRAY	QUART	W-3554AU-QT	LAKELAND BLUE	QUART
Y-6100AU-G	POLAR GRAY	GALLON	W-3554AU-G	LAKELAND BLUE	GALLON
R-4870AU-QT	NEUTRAL GRAY	QUART	H-9170AU-QT	BAHAMA BLUE	QUART
R-4870AU-G	NEUTRAL GRAY	GALLON	H-9170AU-G	BAHAMA BLUE	GALLON
M-9514AU-QT	METALLIC SILVER	QUART	W-8430AU-QT	NEWPORT METALLIC BLUE	QUART
M-9514AU-G	METALLIC SILVER	GALLON	W-8430AU-G	NEWPORT METALLIC BLUE	GALLON
H-6117AU-QT	BLACK	QUART	X-5700AU-QT	MIAMI BLUE	QUART
H-6117AU-G	BLACK	GALLON	X-5700AU-G	MIAMI BLUE	GALLON
B-9916AU-QT	RENO GOLD	QUART	W-9506AU-QT	AN TRUE BLUE	QUART
B-9916AU-G	RENO GOLD	GALLON	W-9506AU-G	AN TRUE BLUE	GALLON
R-4869AU-QT	OLIVE DRAB	QUART	M-9502AU-QT	INSIGNIA BLUE	QUART
R-4869AU-G	OLIVE DRAB	GALLON	M-9502AU-G	INSIGNIA BLUE	GALLON
F-2406AU-QT	FEDERAL GREEN	QUART	Y-6350AU-QT	FOREST GREEN	QUART
F-2406AU-G	FEDERAL GREEN	GALLON	Y-6350AU-G	FOREST GREEN	GALLON
M-9512AU-QT	LEMON YELLOW	QUART	F-5830AU-QT	MONTEGO GREEN	QUART
M-9512AU-G	LEMON YELLOW	GALLON	F-5830AU-G	MONTEGO GREEN	GALLON
D-9270AU-QT	AG CAT YELLOW	QUART	W-8427AU-QT	TAMPA GREEN	QUART
D-9270AU-G	AG CAT YELLOW	GALLON	W-8427AU-G	TAMPA GREEN	GALLON
M-9501AU-QT	AN ORANGE YELLOW	QUART			
M-9501AU-G	AN ORANGE YELLOW	GALLON			
E-6427AU-QT	AERONCA 7AC YELLOW	QUART			
E-6427AU-G	AERONCA 7AC YELLOW	GALLON			
F-6285AU-QT	CUB J3 YELLOW	QUART			
F-6285AU-G	CUB J3 YELLOW	GALLON			
Y-5783AU-QT	DALLAS YELLOW	QUART			
Y-5783AU-G	DALLAS YELLOW	GALLON			
N-3353AU-QT	FEDERAL YELLOW	QUART			
N-3353AU-G	FEDERAL YELLOW	GALLON			
M-9521AU-QT	LOCKHAVEN YELLOW	QUART			
M-9521AU-G	LOCKHAVEN YELLOW	GALLON			

FINISHING: METAL, FABRIC, & PAINT

RANTHANE CATALYST

Catalyst for High Solids Polyurethane colors. 1 catalyst to 2 paint: 1 Pint catalyst to 1 Quart paint. 2 Quarts catalyst to 1 Gallon paint. 2 Gallons & 2 Quarts catalyst to 5 Gallon Paint.



PART#	SIZE
AUCAT-PT	PINT
AUCAT-QT	QUART

POLYURETHANE REDUCER

Custom blend of solvents used for the proper reduction of mixed Ranthane to the correct spray viscosity.



PART#	SIZE
G4200-QT	QUART
G4200-G	GALLON

RANTHANE ACCELERATOR

Created to speed drying time of Ranthane. Add accelerator after it has been mixed with catalyst. Shortens pot life of Ranthane. Normal dry time for Ranthane under 8 hours with accelerator 6 to 6-1/2 hours. The amount can be up to 4 ounces per gallon.



PART#	SIZE
D7201-QT	QUART

ALUMINUM PASTE

The aluminum paste is used for protection against ultraviolet rays that damage the fibers of the cloth. Mix ratio is one pound of paste to five gallons clear dope before thinning. Used during one of the fill coats, it should be noted that the aluminum dope is not a sanding coat.



PART#	SIZE
701	1 POUND

EPOXY SPAR VARNISH

For use in painting crank cases and cylinders of aircraft engines after major overhaul.



PART#	SIZE	COLOR
D5973E-QT	QUART	GOLD
303-QT	QUART	BLACK

EPOXY VARNISH CATALYST

This specialty product is used as a spray on the bottom of aluminum floats on amphibious aircraft to protect them from marine growth. Reduce with Randolph 286 Nitrate Thinner.



PART#	SIZE
344-QT	QUART



Wicks also sells Superflite and Stewart Systems paint products.

Check out our website for more information.

WWW.WICKSAIRCRAFT.COM

FIREWALL FORWARD

AERODUCT DUCTING

Neoprene and silicone impregnated wire coil supported fiberglass aircraft ducting meets applicable FAA and military specifications. Neoprene ducting is stocked in 10 foot lengths. Silicone ducting is stocked in 11 foot lengths. Odorless and nontoxic ducting is important in heat and vent systems. Aeroduct neoprene and silicone ducts have been fully tested by civilian, commercial and military aircraft manufacturers and approved. Buna ("nitrile") types have odor at elevated temperatures.



CAT– 1 ply neoprene impregnated fiberglass with very closely spaced spiral copper coated high carbon steel wire inside exterior wrapped fiberglass cord. From -85 degrees F to over 350 degrees F. Aircraft type. Maximum length 10 feet. (BLACK).

SCAT– 1 ply same as CAT except with silicone rubber impregnation. From -80 degrees F to over 450 degrees F. Aircraft and industrial type. Maximum length 11 feet. (RED).

CEET– 2 ply neoprene impregnated fiberglass same as CAT except wire between plies. From -85 degrees F to over 350 degrees F. Aircraft type. Maximum length 10 feet. (BLACK).

SCEET– 2 ply same as SCAT except wire between plies. From -80 degrees F to over 500 degrees F. Aircraft and industrial type. Maximum length 11 feet. (RED).

PART#	COLOR	I.D.	PART#	COLOR	I.D.	PART#	COLOR	I.D.	PART#	COLOR	I.D.
CAT-3	BLACK	3/4"	CEET-4	BLACK	1"	SCAT-3	RED	3/4"	SCEET-3	RED	3/4"
CAT-3A	BLACK	7/8"	CEET-5	BLACK	1-1/4"	SCAT-3A	RED	7/8"	SCEET-4	RED	1"
CAT-4	BLACK	1"	CEET-6	BLACK	1-1/2"	SCAT-4	RED	1"	SCEET-5	RED	1-1/4"
CAT-5	BLACK	1-1/4"	CEET-7	BLACK	1-3/4"	SCAT-5	RED	1-1/4"	SCEET-6	RED	1-1/2"
CAT-6	BLACK	1-1/2"	CEET-8	BLACK	2"	SCAT-6	RED	1-1/2"	SCEET-7	RED	1-3/4"
CAT-7	BLACK	1-3/4"	CEET-9	BLACK	2-1/4"	SCAT-7	RED	1-3/4"	SCEET-8	RED	2"
CAT-8	BLACK	2"	CEET-10	BLACK	2-1/2"	SCAT-8	RED	2"	SCEET-9	RED	2-1/4"
CAT-10	BLACK	2-1/2"	CEET-12	BLACK	3"	SCAT-10	RED	2-1/2"	SCEET-10	RED	2-1/2"
CAT-11	BLACK	2-3/4"	CEET-16	BLACK	4"	SCAT-11	RED	2-3/4"	SCEET-11	RED	2-3/4"
CAT-12	BLACK	3"				SCAT-12	RED	3"	SCEET-12	RED	3"
CAT-13	BLACK	3-1/4"				SCAT-13	RED	3-1/4"	SCEET-13	RED	3-1/4"
CAT-14	BLACK	3-1/2"				SCAT-14	RED	3-1/2"	SCEET-14	RED	3-1/2"
CAT-18	BLACK	4-1/2"				SCAT-16	RED	4"	SCEET-16	RED	4"
CAT-20	BLACK	5"				SCAT-18	RED	4-1/2"			
CAT-24	BLACK	6"				SCAT-20	RED	5"			
						SCAT-24	RED	6"			

AERODUCT FLANGES

Aluminum flange may be welded or riveted in place. Slip ducting over outlet and secure with clamp.



PART#	I.D.	FLANGE O.D.
ADF-1	1"	1-7/8"
ADF-1.5	1-1/2"	2-3/8"
ADF-2	2"	3"
ADF-2.5	2-1/2"	3-1/2"
ADF-2.75	2-3/4"	3-3/4"
ADF-3	3"	4"

BAFFLE SEAL

3" wide, 9' long. Nigencord, coated and cured in neoprene. 1/16" thick conforms to FSR 453 AMS 3783.



PART#
T-8071

BAFFLE FASTENER KIT

8/32" Male and Female Aluminum. Sold in packs of 10.



PART#
BFK-10

FIREWALL FORWARD

BA-105 BRACKETT AIR FILTER ASSEMBLY

Style II: Foam element on outside of steel screen cylinder – round or oval

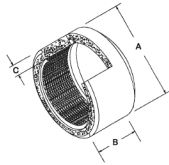
Fits Aircraft Models:

Grumman G164B

PA-28R-201, PA-28RT-201, PA28R-180,

PA28R-200

PA-30-160, PA-34-200, PA-39, PA-44-180



PART#

BA-105

BA-10 BRACKETT AIR FILTER ELEMENT

Fits Aircraft Models:

Grumman G164B

PA-28R-201,

PA-28RT-201, PA28R-180,

PA28R-200

PA-30-160, PA-34-200, PA-39, PA-44-180



PART#

FITS ASSEMBLY

BA-10

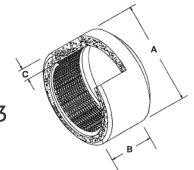
BA-105

BA-104 BRACKETT AIR FILTER ASSEMBLY

Fits Aircraft Models:

PA-23, 24, 25, 28, 32, 34 & 36

Beech Musketeer A/B-23



PART#

BA-104

BA-3 BRACKETT AIR FILTER ELEMENT

Fits Aircraft Models:

PA-23, 24, 25, 28, 32, 34 & 36

Beech Musketeer A/B-23



PART#

FITS ASSEMBLY

BA-3

BA-104

BA-4106 BRACKETT AIR FILTER ASSEMBLY

Style I: External frame rectangle or square.

Aircoupe F-1, A-1, A2-2

Cessna 120, 140, 140A, 150, 150A through M, A150M, 152, A152, F150G,

H, J, K, L, M, FA150K, L,

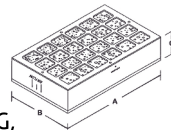
F152, FA152 Champion 7ECA with Continental O-200-A engine, 7ACA, 7ECA, 7FC, 65CA

Luscombe 8, 8A through 8F, T8F Mooney

M-10 Piper J-3, J-4, J-5 PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-19, PA-20 (115 and 135 hp), PA-22

(all), PA-38 Swift GC-1A, GC-1B

Taylorcraft (all models) Varga 2150A



PART#

BA-4106

BA-4108 BRACKETT AIR FILTER ELEMENT

Aircoupe F-1, A-1, A2-2

Cessna 120, 140, 140A, 150, 150A through M, A150M, 152, A152, F150G, H, J, K, L, M, FA150K, L,

F152, FA152 Champion 7ECA with Continental O-200-A engine, 7ACA, 7ECA, 7FC, 65CA

Luscombe 8, 8A through 8F, T8F Mooney

M-10 Piper J-3, J-4, J-5 PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-19, PA-20 (115 and 135 hp), PA-22

(all), PA-38 Swift GC-1A, GC-1B

Taylorcraft (all models) Varga 2150A



PART#

FITS ASSEMBLY

BA-4108

BA-4106

BA-5110 BRACKETT AIR FILTER ASSEMBLY

Fits Cessna 170 ALL 172 Thru M;

Reims F172 D-M;

Mooney Mite M-18C



PART#

BA-5110

BA-6108 BRACKETT AIR FILTER ELEMENT

Fits Cessna 170 ALL 172 Thru M;

Reims F172 D-M;

Mooney Mite M-18C



PART#

FITS ASSEMBLY

BA-6108

BA-5110

BA-9105 BRACKETT AIR FILTER ELEMENT

Stinson 108, 108-1, 108-2, 108-3



PART#

BA-9105

FIREWALL FORWARD

CURTIS PIPE THREAD DRAIN VALVES

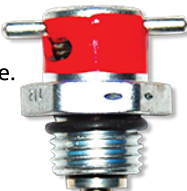
Quick opening brass drain valve for aircraft oil or fuel systems. A slight twist opens valve. No safety wire needed in closed position. FAA approved. TSO-C76 Approved.



PART#	THREAD	TYPE
CCA-1250	1/8 NPT	FUEL
CCA-1300	1/4 NPT	FUEL
CCA-1350	3/8 NPT	FUEL
CCA-1400	1/2 NPT	FUEL
CCA-1550	1/8 NPT	FUEL
CCA-1600	1/4 NPT	FUEL
CCA-1650	3/8 NPT	FUEL
CCA-1700	1/2 NPT	FUEL
CCA-1800	1/8 NPT	FUEL
CCA-1900	1/4 NPT	FUEL
CCA-3600	1/4 NPT	FUEL
CCA-26150	1/8 NPT	FUEL
CCA-4800	1/4 NPT	FUEL
CCA-4850	1/8 NPT	FUEL
CCA-4900	1/4 NPT	FUEL
CCA-4950	3/8 NPT	FUEL
CCA-7450	1/8 NPT	FUEL
CCA-9950	1/8 NPT	FUEL
CCB-36000H	1/2 NPT	FUEL

CURTIS STRAIGHT THREAD DRAIN VALVES

Quick opening brass drain valve for aircraft oil or fuel systems. A slight twist opens valve. No safety wire needed in closed position. FAA approved. TSO-C76 Approved.



PART#	THREAD	TYPE
CCA-2000	3/8-24 UNF	FUEL
CCA-2100	7/16-20 UNF	FUEL
CCA-31300	9/16-18 UNF	FUEL
CCA-36400	9/16-18 UNF	FUEL
CCA-4300	7/16-20 UNF	FUEL
CCA-4350	9/16-18 UNF	FUEL
CCA-5400	7/16-20 UNF	FUEL
CCA-5800-1	7/16-20 UNF	FUEL
CCA-5800-3	7/16-20 UNF	FUEL
CCA-7500-1	3/4-16 UNF	FUEL
CCB-33000	5/8-18 UNF	FUEL

CURTIS HOSE BARB DRAIN VALVE

Quick opening brass drain valve for aircraft oil or fuel systems. A slight twist opens valve. No safety wire needed in closed position. FAA approved. TSO-C76 Approved.



PART#	THREAD	TYPE
CCA-2440	14 MM	OIL
CCA-2450	12MM	OIL
CCA-2460	1/2-20	OIL
CCA-2470	12 MM	OIL
CCA-2475	12 MM	OIL
CCA-2480	1/2-20	OIL
CCA-2485	1/2-20	OIL
CCA-39550	5/8-18	OIL
CCA-39560	5/8-18	OIL

SAF-AIR PUSH TO DRAIN VALVE

SAF-AIR valves are manufactured with an o-ring placed on the stem to seal against a flat seat on the body. This design eliminates an area where dirt can gather, thus putting an end to the main cause of fuel drain valve drip.



PART#	THREAD	TYPE
CAV-110	1/8 NPT	FUEL
CAV-160	1/4 NPT	FUEL
CAV-170	7/16-20	FUEL
CAV-180	3/8-24	FUEL

SAF-AIR HOSE NIPPLE DRAIN VALVE

SAF-AIR valves are manufactured with an o-ring placed on the stem to seal against a flat seat on the body. This design eliminates an area where dirt can gather, thus putting an end to the main cause of fuel drain valve drip.



PART#	THREAD	TYPE
CAV110-H4	1/8 NPT	FUEL

SAF-AIR OIL DRAIN VALVE

SAF-AIR valves are manufactured with an o-ring placed on the stem to seal against a flat seat on the body. This design eliminates an area where dirt can gather, thus putting an end to the main cause of fuel drain valve drip.



PART#	THREAD	TYPE
S6250	5/8-18	OIL
S1000	1-18	OIL
P5000	1/2 NPT	OIL
M12175	12MM X 1.75	OIL

FIREWALL FORWARD

AEROSHELL MULTI-VISCOSITY OIL

Multi-viscosity aviation oil.
Good for all seasons.



PART#

AS15W-50

AEROSHELL W100 SINGLE GRADE OIL

Single grade oil – good
for winter in Midwest
area.



PART#

AS100

AEROSHELL 100 MINERAL OIL

Straight mineral oil is
generally
recommended for use
during an engine's
break-in period, until
piston rings are
properly seated.



PART#

AS100M

AEROSHELL W100 PLUS

A new single grade oil
that combines proven
Aeroshell ashless
dispersant (Detergent)
technology with
advanced antiwear
additives.



PART#

AS100W-PLUS

AEROSHELL SPORT 4

Aeroshell's second
generation of piston engine
oil, specifically designed for
light sport and very
light/ultralight aircraft
4-stroke engines.



PART#

AS-SPORT4

PHILLIPS MULTI-VISCOSITY OIL

Phillips 20W-50 multi-vis aviation
oil, good for all seasons.



PART#

XC20W-50

CAMGUARD

CamGuard Aviation is a
blend of 11 high
performance additives
that fortify piston
aircraft oils to provide
the utmost in engine
protection.



PART#

CAMGUARD

ENGINE PRESERVATIVE OIL

Cortec VCI326 is a broad range
corrosion inhibitor oil additive
recommended by Lycoming
Service Letter# L180B for
maintaining inactive engines.
Provides protection for up to 24
mos at both contact and vapor
levels. Simply add to present
engine oil at ratio of 1 part
VCI326 to 10 parts oil and then
warm-up engine to operating
temp. Meets MIL- 46002 &
MIL-I-85062 (AS)



PART#

VCI326-PT

EZ-TURN LUBE

A specialty
lubricant/sealant
for fuel & oil line
valves where
high-octane fuels,
chemical compounds, or
other harsh elements are
present. Will not gum, dry out or
crack. Also effective for its
anti-corrosion, antiseize, &
anti-wear properties. Shelf life:
18 mos. Temp range: 600+°F.
Meets MIL-G-6032D AM I Type I.



PART#

FL5

FIREWALL FORWARD

AVBLEND OIL ADDITIVE

A unique engine oil additive which actually soaks into engine components, preventing premature engine wear, dry-start damage, rust & corrosion from engine inactivity, and build-up of carbon, varnish & coke deposits. Tests also show benefits in greater horsepower output and decreased fuel consumption. FAA-approved.



PART#

AVB12

TCP FUEL TREATMENT

Since the introduction of 100LL as the main fuel for low-compression engines, Alcor has been a leader in providing pilots a fuel treatment that eliminates lead before it can cause fouling.



PART#

TCP

DEHYDRATOR PLUGS

Dehydrator plugs are used to prevent rust and corrosion in engines while in storage. These plugs contain silica gel which turns from blue to pink when moisture is absorbed. The reusable gel may be reactivated (after removing from reservoir) by heating the gel crystals. Once the crystals turn blue they can be replaced into the plastic container.



PART#

MS27215-2

HOMEBUILDER'S GASCOLATOR

Homebuilder's special, complete all metal gascolator with screen, 2-1/8" dia. bowl with quick drain. Top casting has two 1/4" pipe ports for 3/8" fuel line and one 1/8" port for primer fitting. Screen is 120 microns.

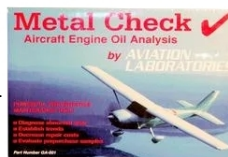


PART#

GAS-HBS-1

OIL ANALYSIS KIT

This oil analysis kit is used for determination of the condition of oil wetted engine parts, even on the first sample. Two versions. One without postage and one with.



PART#

TYPE

GA001 WITHOUT POSTAGE
GA-001-SP WITH POSTAGE

TEMPEST OIL FILTER TORQUE WRENCH

The Tempest oil filter torque ratchet wrench is a great addition to any aviation mechanics toolbox. The Tempest Torque Wrench has a 1 inch box end which allows easy installation or removal of all oil filters. The torque wrench is set to 17 foot pounds of pre-set torque, but can easily be recalibrated. Length 6 Inches.



PART#

AA472

CHAMPION OIL FILTERS

New style spin on filters are 1/2" shorter than the industry standard for easier installation. Other improvements include a zinc plated, corrosion resistant stud and an 8 hole inlet design with 30% greater inlet flow area than previous.



PART#

THREAD

CH48108-1 3/4-16 UNF-2B
CH48103-1 13/16-16 16NSP
CH48109-1 3/4-16 UNF-2B
CH48110-1 3/4-16 UNF-2A

ENGINE PRESERVATIVE OIL

Spin-On Oil Filter, FAA/PMA Approved. The full size filter design incorporates the following features as compared to the competitive filters: Thickest can and base plate with full weld integrity.



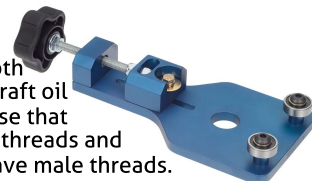
PART#

THREAD

AA48103 13/16-16 16NSP
AA48108-2 3/4-16 UNF-2B
AA48109-2 3/4-16 UNF-2B
AA48110-2 3/4-16 UNF-2B

OIL FILTER CUTTER

This oil filter cutter will work with both styles of aircraft oil filters — those that have female threads and those that have male threads. This tool will cut filters from 3" diameter up to 4-3/4" diameter. Some of the newer aircraft filters have a thicker steel base plate. This newly designed filter cutter has the cutting wheel height and guide bearings located higher so the cutting wheel cuts above the thicker base plates.



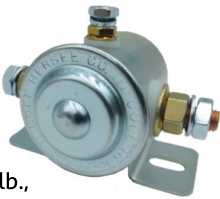
PART#

AE81031

FIREWALL FORWARD

SOLENOIDS

Cole Hersee solenoids master and starter. Battery connects to right stud (facing front) Maximum torque requirements: 10-32 threaded studs 15 in/lb., 5/16-24 threaded studs – 35 in/lbs. Master: 12 volt continuous duty. Starter: 12 volt grounded intermittent duty. 750 amps make 100 amps break with 10 seconds on – 20 minutes off.



PART# TYPE

24037	STARTER
24115	MASTER

TANK MOUNT FUEL VALVE

Tank mounted straight ball valve with 90 degree on-off. 1/4" barbed outlet. Requires FTG12240 grommet for installation.



PART#

FV-11012

TANK MOUNT FUEL VALVE WITH SCREEN

Tank mount ball valve with built in filter screen. 90 degree on-off with 1/4" barbed outlet. FTG12240 required for installation.



PART#

FV-11046

PANEL MOUNT FUEL VALVE 90°

Panel mount ball valve with 90 degree on-off. Requires 1/2" mounting hole. Bulkhead nut and washer included. 1/4" barbed inlet/outlet.



PART#

FV-11118

PANEL MOUNT FUEL VALVE TEE

Panel mount dual tank ball valve with 180 degree on-off-on. Requires 1/2" panel hole. Includes bulkhead nut and washer. With 1/4" barbed inlet/outlets.



PART# TYPE

FV-11079

VITON FUEL TANK GROMMET

Self-sealing grommet for use with tank mount valves and elbow fitting. Made of Viton for superior fuel resistance and compatibility. Requires 33/64" mounting hole. Fits the FV-11046 and FV-11032 and is required for installation.



PART#

FTG12240

MINIATURE FUEL VALVES

The lightest (4 oz.), smallest (1.5"), and easiest to operate ball type fuel valve available. Light operating force makes it ideal for remote operation. Teflon seals will not stick. Cadmium plated forged brass.



PART# THREAD

FV-107401	1/4 NPT
FV-107402	3/8 NPT
FV-107403	1/2 NPT

WEATHERHEAD SHUTOFF VALVE

Has handle mounted on 1- 1/4" long shaft. The Delrin spool design eliminates sticking problems. 30 psi. F = FEMALE & M = MALE.



PART# THREAD TYPE

6707	3/8 NPT	4 WAY
6709	3/8 NPT	3 WAY
6747	1/4 NPT	4 WAY
6749	1/4 NPT	3 WAY

UNVENTED FUEL CAPS

2" flush aluminum unvented fuel cap assembly available with either a flat or concave adapter flange. Pullover type cap and O-ring provides tight seal. Adapter flange is 3-3/4" od.



PART# TYPE

UD-3F	FLAT CAP
FC100-002	CONTOURED CAP

FIREWALL FORWARD

303 HOSE MIL-H-8794

Application: Aircraft hydraulic, pneumatic, coolant, fuel and oil systems specified in MS33620.
Temperature rating: -65 degrees F to +250 degrees F.



PART# SIZE

303-3H	3/16
303-4H	1/4
303-5H	5/16
303-6H	3/8
303-8H	1/2
303-10H	5/8

303 HOSE FITTINGS

Aeroquip 491 hose fittings consist of an AN818 style nut with internally threaded 37° threads. Fittings conform to MS24587.



PART# SIZE

491-3	3/16
491-4	1/4
491-5	5/16
491-6	3/8
491-8D	1/2
491-10D	5/8

306 HOSE MILH-5393

Application: Low pressure air and vacuum instrument systems.
Temperature rating: -65° to +165°F.



PART# SIZE

306-2H	1/8
306-3H	3/16
306-4H	1/4
306-6H	3/8
306-8H	1/2
306-10H	5/8

306 HOSE FITTINGS

For use with 306 hose.



PART#

471-2D
471-3D
471-4D
471-6D
471-8D
471-10D

STRATOFLEX HOSE

Operating temperatures -65° F to +450° F. The inner tube is spiral extruded Teflon resin and the outer cover is type 300 Series stainless steel wire braid. For pressures up to 1500 psi.



PART# TYPE

666-4
666-6
666-8

STRATOFLEX FITTINGS

Stratoflex reusable fittings. 37 degree fittings for use with 666 medium pressure Teflon hose.

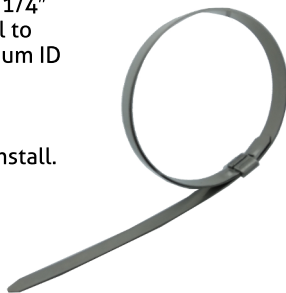


PART#

F66000-4
F66000-6
F66000-8

FIRESLEEVE CLAMPS

Stainless steel 1/4" wide band, pull to tighten. Maximum ID - 2-1/16". Use clamping tool FS4623 sold separately to install.



PART#

10781-4-32CR

FIRESLEEVE

Fire resistant hose for use on fuel, oil, and hydraulic lines. Use with 303, 156 hose.



PART# SIZE

2650-9
2650-12
2650-14

OIL & COOLANT HOSE MILDTL6000

A tough, yet flexible, seamless extruded hose of uniform wall thickness. Specifically designed for oil, water, & coolant aircraft engine applications. Temp range: -40F to +250F. Burst pressure: 1000 psi each diameter. Max 10 ft lengths.



PART# SIZE

MILDTL6000-1/4	1/4"
MILDTL6000-3/8	3/8"
MILDTL6000-1/2	1/2"
MILDTL6000-5/8	5/8"
MILDTL6000-3/4	3/4"
MILDTL6000-1	1"

FIREWALL FORWARD

BRASS EXHAUST NUT CONTINENTAL

Fits C-75, C-85, C-90, O- 200.



PART#	THREAD
22022	5/16

EXHAUST NUT LYCOMING

For Lycoming engine 5/16- 18 or 1/4-20 steel nuts.



PART#	THREAD
STD-1410	5/16-18
STD-1411	1/4-20

EXHAUST STUD CONTINENTAL

Fits C75, C85, C90, O- 200A-B Continental engines. Size: 5/16-24 on one end & 5/16-18 on the other X 1-1/4" long.



PART#
402151

EXHAUST STUD LYCOMING

Lycoming engine exhaust studs. Approved for all Lycoming engines from 0235 to 0540, with safety wire hole to insure security of exhaust stock on each cylinder.



PART#
31C12

EXHAUST FLANGE GASKET

Available in spiral wound. When installing be sure that exhaust stack and cylinder flanges are flat. Torque exhaust re-torque after hot. For continental or Lycoming.



PART#	TYPE
PA627429	CONTINENTAL
PA77611	LYCOMING

EXHAUST GASKET

Solid with raised bead, used in pairs. Fits all Continentals A65, C85, C90, 200 300, E185, E225, O470-A,E,J Raised Bead (Pair).



PART#
632837

SOUNDPROOFING

This material is a closed cell vinyl/nitrile insulation foam. It is excellent for use anywhere in the cabin, firewall or bulkhead. It does not absorb water or oil and can also be used for heat insulation. This soundproofing insulation is also fire retardant and meets FAR25.853b, making it suitable for aircraft use. Burn test available upon request. 55" wide. Sold by the foot.



PART#	THICKNESS
SP-125	1/8"
SP-250	1/4"
SP-500	1/2"
SP-750	3/4"

CHAFE SEAL

Cotton material used where cowl overlaps airframe and around inspection doors. Not affected by cold, heat or chemicals.



PART#
A-56

TEFLON ANTI-CHAFE TAPE

A pressure sensitive tape commonly used in aircraft as an anti-chafe tape, harness wrap, or anywhere good durability, heat resistance, insulating or low friction properties are required. Flame retardant. Operating temperature range: -100 to 500F. Meets MIL-I-23594C. Supplied in 1" x 18 yd rolls. Grey in color. Thickness 6.5 Mil.



PART#
TAC18

FIREWALL FORWARD



Wicks also sells Odyssey, Gill, Earthx, and ELT batteries.

Check out our website for more information.

WWW.WICKSAIRCRAFT.COM

ADHESIVES

CASCOPHEN KIT

2 Part resorcinol adhesives such as Cascophen are accepted for use by the FAA & widely employed for structural repairs to wooden aircraft. Cascophen (also known as G1131) cures at room temperature to provide a strong, durable and waterproof joint. Resistant to most acids and organic solvents, oils and grease. The liquid resin is an alcohol-water solution of a partially condensed resorcinol-formaldehyde resin containing a suitable reinforcing cellulosic filler. The hardener is a tan powder formulated from paraformaldehyde and a suitable cellulosic filler. Being thermoset, the bond is resistant to elevated temps. and conversely, no loss in bond strength occurs at temperatures as low as -40°F. These features make it advantageous for use as a general marine and aircraft use. It provides strong bonds between many wood and non-wood surfaces. These include treated woods, many plastics, natural and synthetic rubber, primed metal, leather, textiles, paper and fiber boards.



DESCRIPTION	PART #
1 PINT KIT	CP1131-PT
1 QUART KIT	CP1131-QT
1 GAL KIT	CP1131-G
5 GAL KIT	CP1131-5G

HEAVY DUTY SPRAY ADHESIVE

Thermo-Tec's Heavy-Duty Spray Adhesive is perfect for use with the Cool-It Insulation Mat and the Aluminized Heat Barrier, but you don't have to limit its use to these products! Heavy-Duty Spray Adhesive is a fast-drying, quick-bonding, high temperature contact adhesive. Use it wherever you need a secure, long-lasting, easy-to-apply bond. It is available in a generous 16.75 oz. can.



DESCRIPTION	PART #
16.75 OZ	12005

MAX 1 INSTANT GLUE ADHESIVE

Max 1 is a new type of super adhesive known as alpha-cyanocrylate. A unique chemical reaction allows permanent bonding, totally unaffected by heat and cold. Permanently bonds wood, steel, aluminum, porcelain, glass, rubber, hard PVC, ABS, and other common plastics. Non-toxic and biodegradable.



DESCRIPTION	PART #
20 G	MAX-20

PLIOBOND INDUSTRIAL ADHESIVE

A general purpose adhesive. Bonds anything to anything. Recommended for positive mounting of various types of plastic accessories on aircraft fabric. Reduce with MEK when needed. 1 yr shelf life. Due to the VOC content of this product, it cannot be sold nor used in the following states: California, Connecticut, Colorado, Delaware, Washington DC, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, or Virginia.



DESCRIPTION	PART #
1 PINT	10-10-2-PT

FITTINGS

AN800 CODE UNION FITTING

Brass – solder onto copper primer line. This item is typically used with the AN805 Brass Union Nut.



DESCRIPTION	PART #
1/8"	AN800-2

AN804 TEE FITTING

Tube with pipe thread on run, available in aluminum alloy.



TUBE O.D.	THREAD SIZE	PART #
3/16"	3/8"-24	AN804-3D
1/4"	7/16"-20	AN804-4D
5/16"	1/2"-20	AN805-5D
3/8"	9/16"-18	AN805-6D

AN805 BRASS UNION NUT

This union nut is typically used with the AN800 Code Union Fitting since it has 5/16"-32 thread.



TUBE SIZE	THREAD SIZE	PART #
1/8"	5/16"-32	AN805-2

AN806 PLUG

Flared tube, available in both steel or aluminum (D).



TUBE O.D.	THREAD SIZE	PART #
ALUMINUM		
1/8"	5/16"-24	AN806-2D
3/16"	3/8"-24	AN806-3D
1/4"	7/16"-20	AN806-4D
5/16"	1/2"-20	AN806-5D
3/8"	9/16"-18	AN806-6D
1/2"	3/4"-16	AN806-8D
5/8"	7/8"-14	AN806-10D
STEEL		
1/8"	5/16"-24	AN806-2
1/4"	7/16"-20	AN806-4

FITTINGS

AN807 ADAPTER

Hose to universal, available in aluminum alloy.



TUBE O.D.	HOSE I.D.	THREAD SIZE	PART #
1/4"	1/4"	7/16"-20	AN807-4D
1/2"	3/8"	9/16"-18	AN807-6D
1/2"	1/2"	3/4"-16	AN807-8D

AN814 PLUG AND BLEEDER

Plug and bleeder, Screw thread, steel or aluminum (D). You can use this part with the **Fuel Resistant O-Ring** listed next to the size you need.



THREAD SIZE	O-RING PART #	PART #
<u>ALUMINUM</u>		
5/16"-24	MS29513-012	AN814-2D
3/8"-24	MS29513-110	AN814-3D
7/16"-20	MS29513-111	AN814-4D
1/2"-20	MS29513-111	AN814-5D
9/16"-18	MS29513-112	AN814-6D
3/4"-16	MS29513-115	AN814-8D
<u>STEEL</u>		
7/16"-20	MS29513-111	AN814-4

AN815 UNION FITTING

Flared tube available in both steel or aluminum (D). Use with **AN818 Nut** (as shown below) – aluminum with aluminum (D) or steel with steel.



TUBE O.D.	USES NUT AN818	PART #
<u>ALUMINUM</u>		
1/8"	-2D	AN815-2D
3/16"	-3D	AN815-3D
1/4"	-4D	AN815-4D
5/16"	-5D	AN815-5D
3/8"	-6D	AN815-6D
1/2"	-8D	AN815-8D
5/8"	-10D	AN815-10D
3/4"	-12D	AN815-12D
<u>STEEL</u>		
1/8"	-2	AN815-2
3/16"	-3	AN815-3
1/4"	-4	AN815-4
3/8"	-6	AN815-6
1/2"	-8	AN815-8
5/8"	-10	AN815-10D

AN816 NIPPLE FITTING

Flared tube and pipe thread, steel or aluminum (D).



TUBE O.D.	PIPE SIZE	PART #
<u>ALUMINUM</u>		
1/8"	1/8"	AN816-2D
3/16"	1/8"	AN816-3D
1/4"	1/8"	AN816-4D
1/4"	1/4"	AN816-4-4D
5/16"	1/8"	AN816-5D
5/16"	1/4"	AN816-5-4D
3/8"	1/4"	AN816-6D
3/8"	1/8"	AN816-6-2D
3/8"	3/8"	AN816-6-6D
1/2"	1/4"	AN816-7D
1/2"	3/8"	AN816-8D
1/2"	1/2"	AN816-8-8D
5/8"	1/2"	AN816-10D
<u>STEEL</u>		
1/8"	1/8"	AN816-2
3/16"	1/8"	AN816-3
1/4"	1/8"	AN816-4
1/4"	1/4"	AN816-4-4
5/16"	1/8"	AN816-5
5/16"	1/4"	AN816-5-4
3/8"	1/4"	AN816-6
3/8"	1/8"	AN816-6-2
3/8"	3/8"	AN816-6-6
1/2"	1/4"	AN816-7
1/2"	3/8"	AN816-8

AN818 NUT

Steel or aluminum nut to be used with **MS20819 Sleeve Fitting** using the same dash number.



TUBE O.D.	THREAD SIZE	PART #
<u>ALUMINUM</u>		
1/8"	5/16"-24	AN818-2D
3/16"	3/8"-24	AN818-3D
1/4"	7/16"-20	AN818-4D
5/16"	1/2"-20	AN818-5D
3/8"	9/16"-18	AN818-6D
1/2"	3/4"-16	AN818-8D
5/8"	7/8"-14	AN818-10D
3/4"	1-1/16"-12	AN818-12D
<u>STEEL</u>		
1/8"	5/16"-24	AN818-2
3/16"	3/8"-24	AN818-3
1/4"	7/16"-20	AN818-4
5/16"	1/2"-20	AN818-5
3/8"	9/16"-18	AN818-6
1/2"	3/4"-16	AN818-8

AN821 ELBOW FITTING

Flared tube, 90° aluminum (D). Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	USES NUT AN818	PART #
1/8"	-2D	AN821-2D
3/16"	-3D	AN821-3D
1/4"	-4D	AN821-4D
5/16"	-5D	AN821-5D
3/8"	-6D	AN821-6D
1/2"	-8D	AN821-8D

AN824 TEE FITTING

Flared tube steel or aluminum (D). Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	USES NUT AN818	PART #
<u>ALUMINUM</u>		
1/8"	-2D	AN824-2D
3/16"	-3D	AN824-3D
1/4"	-4D	AN824-4D
5/16"	-5D	AN824-5D
3/8"	-6D	AN824-6D
1/2"	-8D	AN824-8D
<u>STEEL</u>		
3/16"	-3	AN824-3
3/8"	-4	AN824-4
1/2"	-6	AN824-6

AN827 CROSS FITTING

Aluminum cross for flared tubes. Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	THREAD SIZE	PART #
3/16"	3/8"-24	AN827-3D
1/4"	7/16"-20	AN827-4D
5/16"	1/2"-20	AN827-5D
3/8"	9/16"-18	AN827-6D

FITTINGS

AN832 UNION FITTING

Flared tube, bulkhead and universal, steel or aluminum (D). Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	THREAD SIZE	PART #
ALUMINUM		
1/8"	5/16"-24	AN832-2D
3/16"	3/8"-24	AN832-3D
1/4"	7/16"-20	AN832-4D
5/16"	1/2"-20	AN832-5D
3/8"	9/16"-18	AN832-6D
1/2"	3/4"-16	AN832-8D
5/8"	7/8"-14	AN832-10D
STEEL		
1/8"	5/16"-24	AN832-2
3/16"	3/8"-24	AN832-3
1/4"	7/16"-20	AN832-4
5/16"	1/2"-20	AN832-5
3/8"	9/16"-18	AN832-6

AN833 ELBOW FITTING

Flared tube, bulkhead and universal, 90° steel or aluminum (D). Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	THREAD SIZE	PART #
ALUMINUM		
1/8"	5/16"-24	AN833-2D
3/16"	3/8"-24	AN833-3D
1/4"	7/16"-20	AN833-4D
5/16"	1/2"-20	AN833-5D
3/8"	9/16"-18	AN833-6D
1/2"	3/4"-16	AN833-8D
STEEL		
3/16"	3/8"-24	AN833-3
1/4"	7/16"-20	AN833-4
3/8"	9/16"-18	AN833-6

AN834 TEE FITTING

Flared, tube, bulkhead and universal steel or aluminum (D). Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	THREAD SIZE	PART #
ALUMINUM		
3/16"	3/8"-24	AN834-3D
1/4"	7/16"-20	AN834-4D
5/16"	1/2"-20	AN834-5D
3/8"	9/16"-18	AN834-6D
1/2"	3/4"-16	AN834-8D
STEEL		
1/8"	5/16"-24	AN834-2
3/16"	3/8"-24	AN834-3
1/4"	7/16"-20	AN834-4

AN837 ELBOW FITTING

Flared tube, bulkhead and universal, 45 degree steel or aluminum (D) elbow. Fittings should be matched aluminum with aluminum or steel with steel.



TUBE O.D.	THREAD SIZE	PART #
ALUMINUM		
1/8"	5/16"-24	AN837-2D
3/16"	3/8"-24	AN837-3D
1/4"	7/16"-20	AN837-4D
5/16"	1/2"-20	AN837-5D
3/8"	9/16"-18	AN837-6D
1/2"	3/4"-16	AN837-8D
STEEL		
1/4"	7/16"-20	AN837-4
5/16"	1/2"-20	AN837-5

AN838 90° FITTING

Tube to pipe hose to universal bulkhead fitting.



TUBE O.D.	HOSE I.D.	THREAD SIZE	PART #
1/4"	1/4"	7/16"	AN838-4D

AN840 HOSE NIPPLE FITTING

Hose nipple pipe thread fitting, available in aluminum or brass.



HOSE I.D.	PIPE SIZE	PART #
ALUMINUM		
1/4"	1/8"	AN840-4D
3/8"	1/4"	AN840-6D
1/2"	3/8"	AN840-8D
5/8"	1/2"	AN840-10D
3/4"	3/4"	AN840-12D
BRASS		
1/4"	1/8"	AN840-4
3/8"	1/4"	AN840-6

AN842 HOSE ELBOW FITTING

Pipe thread 90° brass or aluminum.



HOSE I.D.	PIPE SIZE	PART #
ALUMINUM		
1/4"	1/8"	AN842-4D
3/8"	1/4"	AN842-6D
1/2"	3/8"	AN842-8D
5/8"	1/2"	AN842-10D
3/4"	3/4"	AN842-12D
1"	3/4"	AN842-16D
BRASS		
3/8"	1/4"	AN842-6

AN844 HOSE ELBOW FITTING

Pipe thread 45° aluminum.



HOSE I.D.	PIPE SIZE	PART #
1/4"	1/8"	AN844-4D
3/8"	1/4"	AN844-6D
1/2"	3/8"	AN844-8D

AN867 WELDING FLANGE

These aluminum flanges can be welded into aluminum gas tanks or bonded into composite tanks.



DIAMETER	HEIGHT	FEMALE THREAD	PART #
1-1/2"	7/16"	1/8"	AN867-1
1-3/4"	5/8"	1/4"	AN867-2
1-7/8"	5/8"	3/8"	AN867-3
2"	3/4"	1/2"	AN867-4
2-1/4"	13/16"	3/4"	AN867-6

AN894 FLARED TUBE REDUCER AND EXPANDER

Flared tube reducer and expander. Fittings should be matched aluminum with aluminum or steel with steel.



TUBE SIZE INTERNAL	TUBE SIZE EXTERNAL	PART #
1/4"	1/8"	AN894-D4-2
1/4"	3/16"	AN894-D4-3
5/16"	1/4"	AN894-D5-4
3/8"	1/4"	AN894-D6-4
1/2"	3/8"	AN894-D8-6

AN910 COUPLING FITTING

Pipe thread aluminum or brass.



PIPE SIZE	PART #
ALUMINUM	
1/8"	AN910-1D
1/4"	AN910-2D
3/8"	AN910-3D
1/2"	AN910-4D
3/4"	AN910-6D
BRASS	
1/8"	AN910-1
1/4"	AN910-2
3/8"	AN910-3

FITTINGS

AN911 NIPPLE FITTING

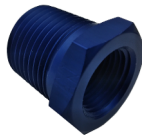
Pipe thread aluminum or brass.



PIPE SIZE	PART #
<u>ALUMINUM</u>	
1/8"	AN911-1D
1/4"	AN911-2D
3/8"	AN911-3D
1/2"	AN911-4D
3/4"	AN911-6D
<u>BRASS</u>	
1/8"	AN911-1
1/4"	AN911-2
3/8"	AN911-3
1/2"	AN911-4

AN912 BUSHING

Pipe thread reducer aluminum (D) or brass.



PIPE I.D.	PIPE O.D.	PART #
<u>ALUMINUM</u>		
1/8"	1/4"	AN912-1D
1/4"	3/8"	AN912-2D
1/8"	3/8"	AN912-3D
3/8"	1/2"	AN912-4D
1/4"	1/2"	AN912-6D
1/2"	3/4"	AN912-7D
3/8"	3/4"	AN912-8D
1/4"	3/4"	AN912-9D
<u>BRASS</u>		
1/8"	1/4"	AN912-1
1/4"	3/8"	AN912-2
1/8"	3/8"	AN912-3
3/8"	1/2"	AN912-4

AN914 ELBOW FITTING

Internal and external pipe thread, 90° aluminum or brass. Both ends are same size.



PIPE SIZE	PART #
<u>ALUMINUM</u>	
1/8"	AN914-1D
1/4"	AN914-2D
3/8"	AN914-3D
1/2"	AN914-4D
3/4"	AN914-6D
<u>BRASS</u>	
1/8"	AN914-1
1/4"	AN914-2

AN915 ELBOW FITTING

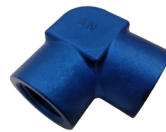
Internal thread, 45° aluminum or brass.



PIPE SIZE	PART #
<u>ALUMINUM</u>	
1/8"	AN915-1D
1/4"	AN915-2D
3/8"	AN915-3D
1/2"	AN915-4D
<u>BRASS</u>	
1/8"	AN915-1

AN915 ELBOW FITTING

Brass or aluminum 90° internal thread pipe elbow fitting.



PIPE SIZE	PART #
<u>ALUMINUM</u>	
1/8"	AN916-1D
1/4"	AN916-2D
3/8"	AN916-3D
1/2"	AN916-4D
<u>BRASS</u>	
1/8"	AN916-1

AN917 TEE FITTING

Internal pipe thread aluminum or brass.



PIPE SIZE	PART #
<u>ALUMINUM</u>	
1/8"	AN917-1D
1/4"	AN917-2D
3/8"	AN917-3D
1/2"	AN917-4D
<u>BRASS</u>	
1/8"	AN917-1

AN918 CROSS FITTING

Aluminum cross with female pipe thread.



PIPE SIZE	PART #
1/8"	AN918-1D
1/4"	AN918-2D

AN919 REDUCER FITTING

External thread flared. Use with AN818 Nut, dash numbers designated.



LARGE END TUBE O.D.	LARGE END AN818 NUT	SMALL END TUBE O.D.	SMALL END AN818 NUT	PART #
<u>ALUMINUM</u>				
3/16"	-3D	1/8"	-2D	AN919-0D
1/4"	-4D	1/8"	-2D	AN919-1D
1/4"	-4D	3/16"	-3D	AN919-2D
5/16"	-5D	1/4"	-4D	AN919-3D
3/8"	-6D	1/8"	-2D	AN919-4D
3/8"	-6D	3/16"	-3D	AN919-5D
3/8"	-6D	1/4"	-4D	AN919-6D
3/8"	-6D	5/16"	-5D	AN919-7D
1/2"	-8D	1/8"	-2D	AN919-8D
1/2"	-8D	1/4"	-4D	AN919-10D
1/2"	-8D	5/16"	-5D	AN919-11D
1/2"	-8D	3/8"	-6D	AN919-12D
5/8"	-10D	3/8"	-6D	AN919-14D
<u>STEEL</u>				
3/8"	-6	1/8"	-2	AN919-4
1/2"	-8	3/8"	-6	AN919-12

AN924 NUT

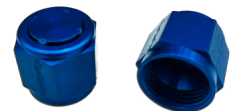
Nut used on fittings, order with same dash number as fitting for proper size. Flared tube, bulkhead and universal fitting aluminum or steel.



TUBE O.D.	THREAD SIZE	PART #
<u>ALUMINUM</u>		
1/8"	5/16"-24	AN924-2D
3/16"	3/8"-24	AN924-3D
1/4"	7/16"-20	AN924-4D
5/16"	1/2"-20	AN924-5D
3/8"	9/16"-18	AN924-6D
1/2"	3/4"-16	AN924-8D
5/8"	7/8"-14	AN924-10D
<u>STEEL</u>		
1/8"	5/16"-24	AN924-2
3/16"	3/8"-24	AN924-3
1/4"	7/16"-20	AN924-4
5/16"	1/2"-20	AN924-5
3/8"	9/16"-18	AN924-6

AN929 CAP FITTING

Aluminum flared tube cap fitting.

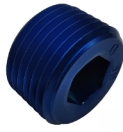


TUBE O.D.	THREAD SIZE	PART #
1/8"	5/16"-24	AN929-2D
3/16"	3/8"-24	AN929-3D
1/4"	7/16"-20	AN929-4D
5/16"	1/2"-20	AN929-5D
3/8"	9/16"-18	AN929-6D
1/2"	3/4"-16	AN924-8D
5/8"	7/8"-14	AN924-10D

FITTINGS

AN932 PLUG FITTING

Internal wrenching hex aluminum plug.



PIPE SIZE	PART #
1/16"	AN932-1D
1/8"	AN932-2D
1/4"	AN932-3D
3/8"	AN932-4D

MS20819 SLEEVE FITTING

These sleeves are used in conjunction with **AN818 Nut** when connecting 37° flared aluminum tubing and fittings (Nut sold separately) steel or aluminum.



TUBE O.D.	USES NUT AN818	PART #
<u>ALUMINUM</u>		
1/8"	-2D	MS20819-2D
3/16"	-3D	MS20819-3D
1/4"	-4D	MS20819-4D
5/16"	-5D	MS20819-5D
3/8"	-6D	MS20819-6D
1/2"	-8D	MS20819-8D
5/8"	-10D	MS20819-10D
3/4"	-12D	MS20819-12D
<u>STEEL</u>		
1/8"	-2	MS20819-2
3/16"	-3	MS20819-3
1/4"	-4	MS20819-4
3/8"	-6	MS20819-6
1/2"	-8	MS20819-8

MS20822 ELBOW FITTING

Flared tube and pipe thread, 90° steel or aluminum (D).



TUBE O.D.	PIPE SIZE	PART #
<u>ALUMINUM</u>		
1/8"	1/8"	MS20822-2D
3/16"	1/8"	MS20822-3D
1/4"	1/8"	MS20822-4D
1/4"	1/4"	MS20822-4-4D
5/16"	1/8"	MS20822-5D
3/8"	1/4"	MS20822-6D
3/8"	1/8"	MS20822-6-2D
3/8"	3/8"	MS20822-6-6D
1/2"	3/8"	MS20822-8D
5/8"	1/2"	MS20822-10D
<u>STEEL</u>		
3/16"	1/8"	MS20822-3
1/4"	1/8"	MS20822-4
1/4"	1/4"	MS20822-4-4
5/16"	1/8"	MS20822-5
3/8"	1/4"	MS20822-6
3/8"	1/8"	MS20822-6-2
3/8"	3/8"	MS20822-6-6
1/2"	3/8"	MS20822-8

MS20823 ELBOW FITTING

Flared tube with pipe thread on side, steel or aluminum (D).



TUBE O.D.	PIPE SIZE	PART #
<u>ALUMINUM</u>		
1/8"	1/8"	MS20823-2D
3/16"	1/8"	MS20823-3D
1/4"	1/8"	MS20823-4D
5/16"	1/8"	MS20823-5D
5/16"	1/4"	MS20823-5-4D
3/8"	1/4"	MS20823-6D
1/2"	3/8"	MS20823-8D
5/8"	1/2"	MS20823-10D
<u>STEEL</u>		
3/16"	1/8"	MS20823-3
1/4"	1/8"	MS20823-4
3/8"	1/4"	MS20823-6
1/2"	3/8"	MS20823-8

MS20825 TEE FITTING

Flared tube with pipe thread on side, steel or aluminum (D).



TUBE O.D.	PIPE SIZE	PART #
<u>ALUMINUM</u>		
1/8"	1/8"	MS20825-2D
3/16"	1/8"	MS20825-3D
1/4"	1/8"	MS20825-4D
5/16"	1/8"	MS20825-5D
3/8"	1/4"	MS20825-6D
1/2"	3/8"	MS20825-8D
<u>STEEL</u>		
1/4"	1/8"	MS20825-4
5/16"	1/8"	MS20825-5
3/8"	1/4"	MS20825-6
1/2"	3/8"	MS20825-8

MS20826 TEE FITTING

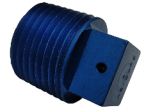
Tube with pipe thread on run steel or aluminum (D).



TUBE O.D.	PIPE SIZE	PART #
<u>ALUMINUM</u>		
1/8"	1/8"	MS20826-2D
3/16"	1/8"	MS20826-3D
1/4"	1/8"	MS20826-4D
5/16"	1/8"	MS20826-5D
3/8"	1/4"	MS20826-6D
1/2"	3/8"	MS20826-8D
<u>STEEL</u>		
1/4"	1/8"	MS20826-4
3/8"	1/4"	MS20826-6
1/2"	3/8"	MS20826-8

MS20913 PLUG FITTING

Square head, pipe thread aluminum or brass.



TUBE O.D.	PART #
<u>ALUMINUM</u>	
1/8"	MS20913-1D
1/4"	MS20913-2D
3/8"	MS20913-3D
1/2"	MS20913-4D
3/4"	MS20913-6D
<u>BRASS</u>	
1/8"	MS20913-1
1/4"	MS20913-2
3/8"	MS20913-3
1/2"	MS20913-4
3/4"	MS20913-6

122 ROUND COPPER TUBING

Seamless copper tubing for primer, fuel and oil pressure lines. Comes in up to 50 ft rolls. Alloy 122 DHP. This tubing is commonly used with the **AN4022 Primer Fitting**.



O.D.	WALL	I.D.	WEIGHT P/FT	PART #
1/8"	.030	.065	.0347	R1/8X030-122
1/4"	.030	.190	.0804	R1/4X030-122
5/16"	.032	.109	.1090	R5/16X032-122
3/8"	.032	.311	.1340	R3/8X032-122

AN4022-1 PRIMER FITTING

Brass primer fitting, which has an internal orifice, 1/8-27 NPT, 5/16-32 thread size. Straight with 1/8" tube size. Commonly used with the **AN800 Code Union Fitting** and the **AN805 Brass Union Nut**.



DESCRIPTION	TUBE SIZE	PART #
STRAIGHT FITTING	1/8"	AN4022-1

BRASS COMPRESSION NUT

Brass compression nut with straight threads, 1/4" and 3/8" sizes available in regular or long version. Long version used when greater vibration resistance is needed. For use with corresponding **brass compression sleeves**.



TUBE SIZE	THREAD SIZE	PART #
1/8"	5/16"-24	61X2
1/4"	7/16"-24	61X4
5/16"	1/2"-24	61X5
3/8"	9/16"-24	61X6
1/4" LONG	7/16"-24	1611X4
3/8" LONG	9/16"-24	1611X6

FITTINGS

BRASS COMPRESSION SLEEVE

Brass compression nut for use in instrumentation, hydraulic and pneumatic systems with working pressures under 2000 psi. Can be used with aluminum or copper tubing when flaring is not required. For use with corresponding [brass compression nut](#).



TUBE O.D.	PART #
1/8"	60X2
1/4"	60X4
5/16"	60X5
3/8"	60X6

UNION ELBOW BRASS COMPRESSION

Brass union elbow; 90°. For use with copper or aluminum tubing with applications under 400 psi. Compression sleeves included.



TUBE O.D.	PART #
1/8"	65F02
1/4"	65F04

90° HOSE ADAPTER

Use for low pressure air, fuel, and oil applications. Brass.



PIPE THREAD	HOSE I.D.	PART #
1/8"	1/4"	1582
1/8"	5/16"	1556
1/8"	3/8"	1572
1/4"	5/16"	1557
1/4"	3/8"	1571
3/8"	3/8"	1576

SEAL FITTING

37 degree flared fitting a soft malleable crush washer designed for MS, AN, and JIC standard 37° flared fitting assemblies. The seals purpose is to provide a lower yield gasket material to the interface periphery at time of torque-up.

Aluminum Seal:

- 420°F to +275°F
- seal helium, hydraulic oil & peroxide, hydrazine, liquid hydrogen & nitrogen, nitric acid, oxygen, pneumatics, and water

Copper Seal:

- 420°F to +800°F
- seal helium, hydraulic oil (non-sulfur base), hydrogen, nitrogen, and oxygen and pneumatics



TUBE O.D.	O.D.	I.D.	INCHES	THICKNESS	PART #
ALUMINUM					
3/16"	.307-.312	.166-.181	.045-.060	.004-.006	AS4824-A-03
1/4"	.359-.364	.213-.228	.060-.075	.004-.006	AS4824-A-04
5/16"	.421-.428	.275-.280	.060-.075	.004-.006	AS4824-A-05
3/8"	.476-.481	.338-.353	.060-.075	.004-.006	AS4824-A-06
7/16"	.539-.544	.401-.416	.060-.075	.004-.006	AS4824-A-07
1/2"	.654-.659	.446-.461	.080-.095	.009-.011	AS4824-A-08
COPPER					
3/16"	.307-.312	.166-.181	.045-.060	.004-.006	AS4824-C-03
1/4"	.359-.364	.213-.228	.060-.075	.004-.006	AS4824-C-04
5/16"	.421-.428	.275-.280	.060-.075	.004-.006	AS4824-C-05
3/8"	.476-.481	.338-.353	.060-.075	.004-.006	AS4824-C-06
7/16"	.539-.544	.401-.416	.060-.075	.004-.006	AS4824-C-07
1/2"	.654-.659	.446-.461	.080-.095	.009-.011	AS4824-C-08

90° STREET ELBOW FITTING

Weatherhead brass pipe elbow. These fittings provide flexibility in the routing of lines which terminate in male pipe threads.



PIPE MALE	THREAD FEMALE	PART #
1/8"	1/8"	3400X2
1/4"	1/4"	3400X4
3/8"	3/8"	3400X6

90° STREET TEE FITTING

Weatherhead brass pipe tee. This fitting provides flexibility in the routing of lines which terminate in male pipe threads.



PIPE MALE	THREAD FEMALE	PART #
1/8"	1/8"	3750X2
1/4"	1/4"	3750X4
3/8"	3/8"	3750X6

BRASS CROSS FITTING

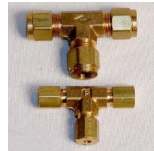
Brass cross with female pipe threads.



THREAD FEMALE	APPLICATION	PART #
1/8"	FUEL	3950X2
1/4"	FUEL	3950X4
3/4"	FUEL	3950X6

UNION TEE BRASS COMPRESSION

Brass union tee fitting. For use with copper or aluminum tubing in applications under 400 psi. Compression sleeves included.



TUBE O.D.	PART #
1/8"	64F02
1/4"	64F04

37° FITTING REDUCER

Steel fitting reducer with 37° flare on reducer end. Use [AN818 Nut](#) for attachment.



TUBE REDUCTION	PART #
3/8" TO 1/4"	C5015X6X4
1/2" TO 1/4"	C5015X8X4
1/2" TO 3/8"	C5015X8X6

FITTINGS

ELBOW FITTING

Weatherhead brass pipe elbow. This fitting provides flexibility in the routing of lines which terminate in male pipe threads.



THREAD FEMALE	APPLICATION	PART #
1/8"	FUEL	3500X2
1/4"	FUEL	3500X4
3/4"	FUEL	3500X6

FEMALE 37° SWIVEL FITTING

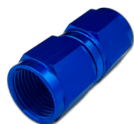
JIC swivel to male pipe adapter. Steel with zinc yellow dichromate finish which provides very good corrosion resistance.



TUBE O.D.	THREAD MALE	PART #
5/16"	1/4"	9100X5X4
1/4"	1/4"	9100X4X4
3/8"	1/4"	9100X6X4
3/8"	3/8"	9100X6X6

FEMALE SWIVEL COUPLING FITTING

37° female flared aluminum swivel coupling for connecting 2 male flared fittings. Blue anodized which provides resistance quality regarding wear and corrosion.



TUBING O.D.	PART #
3/16"	SC303
1/4"	SC404
3/8"	SC606
1/2"	SC808

FEMALE TEE FITTING

Weatherhead brass pipe tee. This fitting provides flexibility in the routing of lines which terminate in male pipe threads.



THREAD FEMALE	PART #
1/8"	3700X2
1/4"	3700X4
3/8"	3700X6

FUEL PUMP ADAPTER

Three configurations available: straight, 90° and 45° elbow. Adapts 9/16-18 straight pump thread to 3/8 flared tubing. Fuel resistant Buna-N O-ring included.



DESCRIPTION	PART #
STRAIGHT	6400-6-6
90° ELBOW	6801-6-6
45° ELBOW	6802-6-6

MALE BRANCH TEE FITTING

Weatherhead brass pipe male branch tee. This fitting provides flexibility in the routing of lines which terminate in male pipe threads.



PIPE MALE	THREAD FEMALE	PART #
1/8"	1/8"	3600X2
1/4"	1/4"	3600X4
3/8"	3/8"	3600X6

MALE JIC FITTING

This fitting has a 37° flare on male end. 3/16" has 7/16-20 thread 5/16" & 3/8" has 9/16-18 thread.



HOSE I.D.	TUBE O.D.	PART #
3/16"	1/4"	3-4MJ
5/16"	3/8"	5-6MJ
3/8"	3/8"	6-6MJ

PIPE THREAD ADAPTER

Brass male to female pipe thread adapter. This adapter provides flexibility in the routing of lines which terminate in male pipe threads.



PIPE MALE	THREAD FEMALE	PART #
1/8"	1/8"	3200X2
1/4"	1/4"	3200X4
1/8"	1/4"	3200X4X2
3/8"	3/8"	3200X6
1/4"	3/8"	3200X6X4
3/8"	1/2"	3200X8X6

PIPE TO TUBE ADAPTER

Steel female pipe to male 37 degree tube adapter.



THREAD	TUBE O.D.	PART #
1/8" NPT FEMALE	1/4" FLARE	2405-4-2
1/8" NPT FEMALE	5/16" FLARE	2405-5-2
1/4" NPT FEMALE	3/8" FLARE	2405-6-4

RESTRICTOR FITTING

Brass restrictor fitting for use in oil, fuel and manifold pressure instrument lines to prevent excessive leakage due to ruptured lines. Installation at the fuel pressure connection will also dampen needle fluctuation due to fuel pump action. Orifice size .040. 1/8" male to 1/8" female NPT.



THREAD	PART #
1/8" NPT	EA22R-O

SMALL HEX UNION FITTING

Small hex union, made of steel. 37° flare on both ends.



SMALL END TUBE O.D.	LARGE END TUBE O.D.	PART #
1/4"	5/16"	C5305X5X4
1/4"	3/8"	C5305X6X4
3/8"	1/2"	C5305X8X6

STRAIGHT HOSE ADAPTER

Brass hose adapter for low pressure air, fuel and oil applications.



HOSE I.D.	PIPE THREAD	PART #
3/16"	1/8"	1541
1/4"	1/8"	1537
5/16"	1/8"	1551
1/4"	1/4"	1581

STRAIGHT PIPE TO FLARE BULKHEAD

Straight pipe to flare bulkhead made of steel.



THREAD	TUBE O.D.	PART #
1/8" NPT FEMALE	1/4" FLARE	2705LN-2-4
1/4" NPT FEMALE	3/8" FLARE	2705LN-4-6
1/8" NPT MALE	1/4" FLARE	2706LN-2-4
1.4" NPT MALE	3/8" FLARE	2706LN-4-6

BRASS INSERT FITTING

Adapter for tubing to compression fitting, without crushing tubing. Recommended use with SK8201 tubing.



TUBE O.D.	PART #
3/16"	2030X4
1/4"	2030X44
5/16"	2030X5

FITTINGS

ELBOW CONNECTOR BRASS COMPRESSION

For use with 122 Copper Tubing or 3003-0 Aluminum Tubing with applications under 400 psi. Compression sleeve included.



TUBE O.D.	PIPE THREAD	PART #
1/8"	1/8"	69F02X02
1/8"	1/4"	69F02X04
1/4"	1/8"	69F04X02
1/4"	1/4"	69F04X04

MALE CONNECTOR BRASS COMPRESSION

Mainly for use with 122 Copper Tubing but can also be used with 3003-0 Aluminum Tubing with applications under 400 psi. Compression sleeve included.



TUBE O.D.	PIPE THREAD	PART #
1/8"	1/8"	68F02X02
1/4"	1/8"	68F04X02
1/4"	1/4"	68F04X04

UNION FITTING

This union tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	SLEEVE MATERIAL	PART #
1/8"	BRASS	262P-02
3/16"	BRASS	262P-03
1/4"	PLASTIC	262P-04

FEMALE CONNECTOR

Brass female connector tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	SLEEVE MATERIAL	PART #
1/8"	1/8"	BRASS	266P-02X02
3/16"	1/8"	BRASS	266P-03X02
1/4"	1/8"	PLASTIC	266P-04X02

MALE ELBOW FITTING

This male elbow tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	SLEEVE MATERIAL	PART #
1/8"	1/8"	BRASS	269P-02X02
3/16"	1/8"	BRASS	269P-03X02
1/4"	1/8"	PLASTIC	269P-04X02
3/8"	1/8"	PLASTIC	269P-06X04

UNION TEE FITTING

This union tee tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	SLEEVE MATERIAL	PART #
3/16"	BRASS	264P-03
1/4"	PLASTIC	264P-04

FEMALE ELBOW FITTING

Brass female elbow tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	SLEEVE MATERIAL	PART #
3/16"	1/8"	BRASS	270P-03X02
1/4"	1/8"	PLASTIC	270P-04X02

MALE RUN TEE FITTING

This run tee tube fitting consists of a brass body and nut with plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	PART #
3/16"	1/8"	271P-03X02
1/4"	1/8"	271P-04X02

90° NYLON ELBOW FITTING

For low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°.



TUBE O.D.	PART #
1/4"	265N-04
3/8"	265N-06

90° NYLON FEMALE ELBOW FITTING

For low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	270N-04X02
1/4"	1/4"	270N-04X04
3/8"	1/4"	270N-06X04

MALE BRANCH TEE FITTING

Male branch tee tube fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	SLEEVE MATERIAL	PART #
3/16"	1/8"	BRASS	272P-03X02
1/4"	1/8"	PLASTIC	272P-04X02

NUT & PLASTIC SLEEVE FITTING

This sleeve fitting consists of a brass body and nut with plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE SIZE	PART #
1/4"	261P-04

NUT FITTING WITH SLEEVE

This sleeve fitting consists of a brass body and nut with brass sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	THREAD SIZE	PART #
1/8"	5/16"-24	261UB-02
3/16"	3/8"-24	261UB-03
1/4"	3/8"-24	261UB-04

MALE CONNECTOR

This male connector fitting consists of a brass body and nut with brass or plastic sleeve. Use with Parflex Pe, PVC or Nylaflo pressure tubing.



TUBE O.D.	PIPE THREAD	SLEEVE MATERIAL	PART #
1/8"	1/8"	BRASS	268P-02X02
3/16"	1/8"	BRASS	268P-03X02
1/4"	1/8"	PLASTIC	268P-04X02

90° NYLON FEMALE ELBOW FITTING

For low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	269N-04X02
1/4"	1/4"	269N-04X04
3/8"	1/4"	269N-06X04

FITTINGS

EQUAL LEG COUPLER FITTING

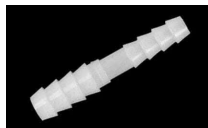
Black nylon equal leg coupler use for air and fuel applications using our Aircraft Plastic Tubing. Maximum temperature: 176°F.



HOSE I.D.	APPLICATION	PART #
1/4"	AIR OR FUEL	CO-4BN
3/8"	AIR OR FUEL	CO-6BN
1/2"	AIR OR FUEL	CO-8BN

NYLON CONNECTOR

This nylon tube to tube connector fitting can be used for air applications with our Aircraft Plastic Tubing.



BARB A	BARB B	PART #
1/8"	1/8"	0706-005
3/16"	3/16"	0706-011
1/4"	1/4"	0706-015
3/8"	3/8"	0706-020

NYLON MALE BRANCH TEE FITTING

For low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°F.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	272N-04X02
1/4"	1/4"	272N-04X04
3/8"	1/4"	272N-06X04
3/8"	3/8"	272N-06X06

EQUAL LEG ELBOW FITTING

Black nylon equal elbow used for air and fuel applications using our Aircraft Plastic Tubing. Maximum temperature: 176°F.



HOSE I.D.	PART #
1/4"	LO-4BN
3/8"	LO-6BN
1/2"	LO-8BN
5/8"	LO-10BN

NYLON ELBOW FITTING TUBE TO PIPE

This nylon tube to pipe elbow fitting can be used for air applications with our Aircraft Plastic Tubing.



THREAD SIZE	BARB SIZE	PART #
1/4" NPT	1/4"	0711-110
1/8" NPT	3/16"	0711-150
1/8" NPT	1/4"	0711-153
1/8" NPT	3/8"	0711-158
1/4" NPT	3/16"	0711-160
1/4" NPT	3/8"	0711-162

NYLON MALE CONNECTOR

This connector is for low pressure fuel and air applications using Aircraft Plastic Tubing. Max operating temp: 180°F.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	268N-04X02
1/4"	1/4"	268N-04X04
3/8"	1/4"	268N-06X04

EQUAL LEG TEE FITTING

Black nylon equal elbow used for air and fuel applications using our Aircraft Plastic Tubing. Maximum temperature: 176°F.



HOSE I.D.	PART #
1/4"	TO-4BN
3/8"	TO-6BN
1/2"	TO-8BN
5/8"	TO-10BN

NYLON ELBOW FITTING TUBE TO TUBE

This sleeve fitting consists of a brass body and nut with plastic sleeve. Use with Parflex Pe, PVC or Nylaflow pressure tubing.



TUBE SIZE	PART #
1/4"	0711-015
3/8"	0711-020

NYLON MALE RUN TEE FITTING

This run tee fitting is for low pressure fuel and air applications using Aircraft Plastic Tubing. Max operating temp: 180°F.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	271N-04X02
1/4"	1/4"	271N-04X04
3/8"	1/4"	271N-06X04

NYLON ADAPTER

This nylon tube to pipe adapter fitting can be used for air applications with our Aircraft Plastic Tubing.



THREAD SIZE	BARB SIZE	PART #
1/4" NPT	1/4"	0701-110
1/8" NPT	3/16"	0701-150
1/8" NPT	1/4"	0701-153
1/8" NPT	5/16"	0701-156
1/8" NPT	3/8"	0701-158
1/4" NPT	3/8"	0701-162

NYLON FEMALE CONNECTOR

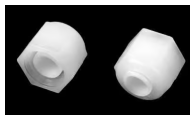
This connector is for low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°F.



TUBE O.D.	PIPE THREAD	PART #
1/4"	1/8"	266N-04X02
1/4"	1/4"	266N-04X04
3/8"	1/4"	266N-06X04

NYLON NUT

This nylon nut is for low pressure fuel and air applications using Aircraft Plastic Tubing. Max operating temp: 180°F.



TUBE O.D.	PART #
1/4"	261N-04
3/8"	261N-06

NYLON BULKHEAD FITTING

For low pressure fuel and air applications using our Aircraft Plastic Tubing. Max operating temp: 180°.



TUBE O.D.	PART #
1/4"	282N-04
3/8"	282N-06

NYLON INSERT FITTING

These inserts are used with Nylon - Air & Low Pressure Fuel fittings and Aircraft Plastic Tubing.



TUBE O.D.	PART #
1/4"	259N-04
3/8"	259N-06

NYLON NUT CAP

End cap for use with 1/4" male NPT threaded Nylon Elbow Fitting Tube to Pipe and Polyethylene Tee Fitting Tube to Pipe.

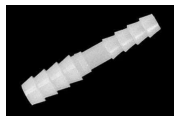


THREAD SIZE	PART #
1/4" NPT	HC-4

FITTINGS

NYLON REDUCING CONNECTOR

This nylon tube to tube reducer fitting can be used for air applications with our [Aircraft Plastic Tubing](#).



BARB A	BARB B	PART #
3/16"	1/4"	0706-042
1/4"	3/8"	0706-045
1/8"	1/4"	0706-153

NYLON TEE FITTING ALL TUBE

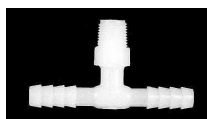
This tee fitting is for low pressure fuel and air applications using [Aircraft Plastic Tubing](#). All ends equal.



ALL BARBS EQUAL	PART #
1/8"	0716-005
3/16"	0716-011
1/4"	0716-015
3/8"	0716-020

NYLON TEE FITTING PIPE TO TUBE

This tee fitting is for low pressure fuel and air applications using [Aircraft Plastic Tubing](#).



THREAD SIZE	BARB SIZE	PART #
1/4" NPT	1/4" X 1/4"	0716-110
3/16" NPT	3/16" X 3/16"	0716-150
1/8" NPT	1/4" X 1/4"	0716-153
1/4" NPT	3/16" X 3/16"	0716-160
1/4" NPT	3/8" X 3/8"	0716-162

NYLON UNION FITTING

This union fitting is for low pressure fuel and air applications using [Aircraft Plastic Tubing](#). Max operating temp: 180°F.



TUBE O.D.	PART #
1/4"	262N-04
5/16"	262N-05
3/8"	262N-06

NYLON UNION TEE FITTING

This union tee fitting is for low pressure fuel and air applications using [Aircraft Plastic Tubing](#). Max operating temp: 180°F.



TUBE O.D.	PART #
1/4"	262N-04
3/8"	262N-06

REDUCTION COUPLER

Black nylon reduction coupler use for air and fuel applications using our [Aircraft Plastic Tubing](#). Maximum temperature: 176°F.



HOSE TO HOSE	APPLICATION	PART #
3/8" TO 1/4"	AIR OR FUEL	C6-4BN
1/2" TO 1/4"	AIR OR FUEL	C8-4BN
1/2" TO 3/8"	AIR OR FUEL	C8-6BN
5/8" TO 3/8"	AIR OR FUEL	C10-6BN
5/8" TO 1/2"	AIR OR FUEL	C10-8BN
3/4" TO 1/2"	AIR OR FUEL	C12-8BN

THREAD-BARB ADAPTER

Black nylon thread-barb adapter used for air and fuel applications using our [Aircraft Plastic Tubing](#). Maximum temperature: 176°F.



HOSE I.D.	THREAD SIZE	PART #
1/4"	1/8" NPT	A2-4BN
3/8"	1/8" NPT	A2-6BN
1/4"	1/4" NPT	A4-4BN
3/8"	1/4" NPT	A4-6BN
1/2"	1/4" NPT	A4-8BN
3/8"	3/8" NPT	A6-6BN
1/2"	3/8" NPT	A6-8BN

THREAD-BARB ELBOW FITTING

Black nylon thread-barb elbow fitting used for air and fuel applications using our [Aircraft Plastic Tubing](#). Maximum temperature: 176°F.



HOSE I.D.	THREAD SIZE	PART #
1/4"	1/8" NPT	L2-4BN
3/8"	1/8" NPT	L2-6BN
1/4"	1/4" NPT	L4-4BN
3/8"	1/4" NPT	L4-6BN
1/2"	1/4" NPT	L4-8BN
3/8"	3/8" NPT	L6-6BN
1/2"	3/8" NPT	L6-8BN

THREAD-BARB TEE FITTING

Black nylon thread-barb tee adapter used for air and fuel applications using our [Aircraft Plastic Tubing](#). Maximum temperature: 176°F.



HOSE I.D.	THREAD SIZE	PART #
1/4"	1/8" NPT	T2-4BN
3/8"	1/8" NPT	T2-6BN
1/4"	1/4" NPT	T4-4BN
3/8"	1/4" NPT	T4-6BN
1/2"	1/4" NPT	T4-8BN
3/8"	3/8" NPT	T6-6BN
1/2"	3/8" NPT	T6-8BN

POLYETHYLENE ADAPTER

Tube to pipe, best for fuel.



THREAD SIZE	BARB SIZE	PART #
1/4" NPT	1/4"	0700-110
1/8" NPT	3/16"	0700-150
1/8" NPT	1/4"	0700-153
1/8" NPT	3/8"	0700-158
1/4" NPT	3/8"	0700-162

POLYETHYLENE ELBOW FITTING

Best for fuel, tube to pipe.



THREAD SIZE	BARB SIZE	PART #
1/4" NPT	1/4"	0710-110
3/8" NPT	3/8"	0710-115
1/8" NPT	1/4"	0710-153
1/8" NPT	3/8"	0710-158
1/4" NPT	3/8"	0710-162

POLYETHYLENE TEE FITTING ALL TUBE

All tube – best for fuel.



TEE SIZE	PART #
1/4" X 1/4" X 1/4"	0715-015
3/8" X 3/8" X 3/8"	0715-020

POLYETHYLENE TEE FITTING TUBE TO PIPE

Best for fuel, tube to pipe.



BARB A	BARB B	PART #
1/4" NPT	1/4" X 1/4"	0715-110
1/8" NPT	1/4" X 1/4"	0715-153
1/4" NPT	3/8" X 3/8"	0715-162

PANEL MOUNT UNION FITTING

Made of fuel resistant acetal, with nickel-plated brass nuts. For panels/bulkheads .040" to .250".



TUBING I.D.	PART #
3/8" X 3/8"	PMU-06

METALS

4130 ROUND TUBING

This chromium-molybdenum alloy is one of the most widely used aircraft steels because of its combination of weldability, ease of fabrication and mild hardenability. MIL-T-6736. Chromoly is a low-alloy steel that is strengthened by its main alloying elements, chromium and molybdenum - thus the name Chromoly. It belongs to the 41xx steel alloy family. its strength-to-weight ratio is higher than standard stainless steel or mild carbon steel. This allows for lighter material while maintaining high strength. However, Chromoly is more brittle than mild steel. Still, it is very useful in a wide array of applications. Due to its low carbon content, it can be easily welded using both TIG welding and MIG welding.



PART#	O.D.	WALL	I.D.	WEIGHT/FT
R3/16X035-41	3/16	0.035	0.1180	0.0572
R1/4X028-41	1/4	0.028	0.1940	0.0664
R1/4X035-41	1/4	0.035	0.1800	0.0804
R1/4X049-41	1/4	0.049	0.1520	0.1052
R1/4X058-41	1/4	0.058	0.1340	0.1189
R1/4X065-41	1/4	0.065	0.1200	0.1284
R5/16X028-41	5/16	0.028	0.2560	0.0804
R5/16X035-41	5/16	0.035	0.2430	0.1039
R5/16X049-41	5/16	0.049	0.2150	0.1382
R5/16X058-41	5/16	0.058	0.1950	0.1580
R5/16X065-41	5/16	0.065	0.1820	0.1722
R3/8X028-41	3/8	0.028	0.3190	0.1069
R3/8X035-41	3/8	0.035	0.3050	0.1271
R3/8X049-41	3/8	0.049	0.2770	0.1706
R3/8X058-41	3/8	0.058	0.2590	0.1964
R3/8X065-41	3/8	0.065	0.2490	0.2152
R3/8X095-41	3/8	0.095	0.1850	0.2841
R7/16X028-41	7/16	0.028	0.3400	0.2036
R7/16X049-41	7/16	0.049	0.3220	0.2354
R7/16X058-41	7/16	0.058	0.3815	0.1160
R1/2X035-41	1/2	0.035	0.4300	0.1738
R1/2X049-41	1/2	0.049	0.4020	0.2360
R1/2X058-41	1/2	0.058	0.3840	0.2738
R1/2X065-41	1/2	0.065	0.3700	0.3020
R1/2X083-41	1/2	0.083	0.3340	0.3696
R1/2X095-41	1/2	0.095	0.3100	0.4109
R1/2X120-41	1/2	0.120	0.2600	0.4870
R9/16X035-41	9/16	0.035	0.4920	0.1974
R9/16X049-41	9/16	0.049	0.4640	0.2690
R9/16X065-41	9/16	0.065	0.4320	0.3457
R9/16X120-41	9/16	0.120	0.3220	0.5677
R5/8X035-41	5/8	0.035	0.5690	0.2205
R5/8X049-41	5/8	0.049	0.5550	0.3014
R5/8X058-41	5/8	0.058	0.5270	0.3667
R5/8X065-41	5/8	0.065	0.5090	0.3512
R5/8X095-41	5/8	0.095	0.4950	0.5377
R5/8X120-41	5/8	0.120	0.4350	0.6472
R5/8X156-41	5/8	0.156	0.3130	0.7814
R3/4X028-41	3/4	0.028	0.6940	0.2159
R3/4X035-41	3/4	0.035	0.6800	0.2673
R3/4X049-41	3/4	0.049	0.6520	0.3668
R3/4X058-41	3/4	0.058	0.6340	0.4287
R3/4X065-41	3/4	0.065	0.6200	0.4755
R3/4X095-41	3/4	0.095	0.5600	0.6646
R3/4X120-41	3/4	0.120	0.5100	0.8074
R3/4X156-41	3/4	0.156	0.4370	0.9897
R3/4X188-41	3/4	0.188	0.3740	1.1260
R3/4X250-41	3/4	0.250	0.2500	1.9124

4130 ROUND TUBING

PART#	O.D.	WALL	I.D.	WEIGHT/FT
R7/8X035-41	7/8	0.035	0.8050	0.3140
R7/8X049-41	7/8	0.049	0.7770	0.4323
R7/8X058-41	7/8	0.058	0.7590	0.5061
R7/8X065-41	7/8	0.065	0.7450	0.5623
R7/8X083-41	7/8	0.083	0.7090	0.7021
R7/8X095-41	7/8	0.095	0.6850	0.7914
R7/8X120-41	7/8	0.125	0.6350	0.9676
R7/8X188-41	7/8	0.188	0.4990	1.3790
R1X028-41	1	0.028	0.9440	0.2907
R1X035-41	1	0.035	0.9300	0.3607
R1X049-41	1	0.049	0.9020	0.4977
R1X058-41	1	0.058	0.8840	0.5835
R1X065-41	1	0.065	0.8700	0.6491
R1X083-41	1	0.083	0.8340	0.8129
R1X095-41	1	0.095	0.8100	0.9182
R1X120-41	1	0.120	0.7600	1.1260
R1X156-41	1	0.156	0.6870	1.4060
R1X188-41	1	0.156	0.6250	1.6300
R1X250-41	1	0.250	0.4990	2.0340
R1-1/8X035-41	1-1/8	0.035	1.0550	0.4074
R1-1/8X049-41	1-1/8	0.049	1.0270	0.5631
R1-1/8X058-41	1-1/8	0.058	1.0090	0.6609
R1-1/8X065-41	1-1/8	0.065	0.9950	0.7359
R1-1/8X095-41	1-1/8	0.095	0.9350	1.0450
R1-1/8X120-41	1-1/8	0.120	0.8850	1.2880
R1-1/8X250-41	1-1/8	0.250	0.6250	2.3880
R1-1/4X035-41	1-1/4	0.035	1.180	0.4542
R1-1/4X049-41	1-1/4	0.049	1.152	0.6285
R1-1/4X058-41	1-1/4	0.058	1.134	0.7384
R1-1/4X065-41	1-1/4	0.065	1.120	0.8226
R1-1/4X083-41	1-1/4	0.083	1.084	1.0340
R1-1/4X095-41	1-1/4	0.095	1.0600	1.1720
R1-1/4X120-41	1-1/4	0.120	1.0100	1.4480
R1-1/4X156-41	1-1/4	0.156	0.9380	1.8230
R1-1/4X250-41	1-1/4	0.250	0.7500	2.6700
R1-3/8X035-41	1-3/8	0.035	1.3050	0.5009
R1-3/8X049-41	1-3/8	0.049	1.2770	0.6939
R1-3/8X058-41	1-3/8	0.058	1.2590	0.8158
R1-3/8X065-41	1-3/8	0.065	1.2450	0.9094
R1-3/8X095-41	1-3/8	0.095	1.1850	1.2990
R1-3/8X120-41	1-3/8	0.120	1.1350	1.6080
R1-3/8X250-41	1-3/8	0.250	0.8700	2.7300
R1-1/2X035-41	1-1/2	0.035	1.4300	0.5476
R1-1/2X049-41	1-1/2	0.049	1.4020	0.7953
R1-1/2X058-41	1-1/2	0.058	1.3840	0.8932
R1-1/2X065-41	1-1/2	0.065	1.3700	0.9962
R1-1/2X083-41	1-1/2	0.083	1.3340	1.2560
R1-1/2X095-41	1-1/2	0.095	1.3100	1.4260
R1-1/2X120-41	1-1/2	0.120	1.2600	1.7690
R1-1/2X188-41	1-1/2	0.188	1.1250	2.6340
R1-5/8X049-41	1-5/8	0.049	1.5270	0.8248
R1-5/8X065-41	1-5/8	0.065	1.0120	1.4950
R1-5/8X083-41	1-5/8	0.083	1.4390	1.2000
R1-5/8X095-41	1-5/8	0.095	1.4350	1.5520
R1-5/8X120-41	1-5/8	0.120	1.3850	1.9290
R1-5/8X156-41	1-5/8	0.156	1.3120	2.4470
R1-5/8X188-41	1-5/8	0.188	1.2500	2.8850
R1-3/4X049-41	1-3/4	0.049	1.6520	0.8902
R1-3/4X058-41	1-3/4	0.058	1.6340	1.0480
R1-3/4X065-41	1-3/4	0.065	1.6200	1.1700
R1-3/4X095-41	1-3/4	0.095	1.5600	1.6790
R1-3/4X120-41	1-3/4	0.120	1.5100	2.0890
R1-3/4X188-41	1-3/4	0.188	1.3750	3.1360
R2X049-41	2	0.049	1.9020	1.0210
R2X065-41	2	0.065	1.8700	1.3430
R2X095-41	2	0.095	1.8100	1.9330
R2X120-41	2	0.120	1.7600	2.4090
R2X188-41	2	0.188	1.6240	3.6380
R2-1/4X120-41	2-1/4	0.120	2.0100	2.7300
R2-1/4X250-41	2-1/4	0.250	1.7500	5.3400
R2-1/2X120-41	2-1/2	0.120	2.2600	3.0500
R2-1/2X250-41	2-1/2	0.250	2	6.0080

METALS

4130 SQUARE TUBING

4130 square steel tubing is valued for its combination of strength, durability, and versatility. It's commonly used in a variety of industries for structural applications where high strength and resistance to deformation are important. The square shape provides excellent torsional strength and allows for easier attachment of fittings and components compared to round tubing. Additionally, 4130 chromoly steel can be welded using common techniques, making it suitable for fabrication and customization according to specific project requirements.



PART#	SIZE	WALL	WEIGHT/FT
SQ3/8X035-41	3/8 X 3/8	0.035	0.2131
SQ1/2X035-41	1/2 X 1/2	0.035	0.2213
SQ5/8X049-41	5/8 X 5/8	0.049	0.3838
SQ3/4X035-41	3/4 X 3/4	0.035	0.3403
SQ3/4X049-41	3/4 X 3/4	0.049	0.4671
SQ3/4X065-41	3/4 X 3/4	0.065	0.6055
SQ7/8X049-41	7/8 X 7/8	0.049	0.5504
SQ1X035-41	1 X 1	0.035	0.4593
SQ1X049-41	1 X 1	0.049	0.6337
SQ1X065-41	1 X 1	0.065	0.8265

4130 NON-STNCILED RECTANGULAR TUBING

4130 rectangular steel tubing. Radius cornered. Purchased in random lengths, sold by the foot. This material has no stamp or stencil with the size and or mil-spec, but does meet the mil-spec.



PART#	SIZE	WALL	WEIGHT/FT
RC1X2X065-41/NS	1 X 2	0.065	1.2690

4130 ROD

4130 solid steel rod, sold by the foot.



PART#	SIZE	WEIGHT/FT
RD5/16-41	5/16	0.2610
RD3/8-41	3/8	0.3760
RD7/16-41	7/16	0.5110
RD1/2-41	1/2	0.6680
RD5/8-41	5/8	1.0430
RD3/4-41	3/4	1.5020
RD7/8-41	7/8	2.0440
RD1-41	1	2.6700
RD1-1/4-41	1-1/4	4.1700
RD1-3/8-41	1-3/8	5.0530
RD1-1/2-41	1-1/2	6.0080

4130 STREAMLINE TUBING

The traditional 4130 streamline is produced by a cold drawn process in short random lengths, whereas High Performance streamline is produced by a roll form process, in which round tubes are sent through a progressive series of rollers and dies. Roll forming is a consistent and gentle operation with fixed tooling.



PART#	MAJOR AXIS	MINOR AXIS
SL1.99-87-4	1.99	0.870

4130 STEEL BAR

4130 Solid steel bar stock.



PART#	THICKNESS	WIDTH	WEIGHT/FT
BR1/8X1-41	1/8	1	0.4250
BR1/8X1-1/2-41	1/8	1-1/2	0.6375
BR1/4X1-1/4-41	1/4	1-1/4	0.5313
BR1/4X1-1/2-41	1/4	1-1/2	0.2760

304 STAINLESS STEEL TUBING

304 is low carbon 18-8 chromium-nickel stainless tubing. It combines excellent physical properties with remarkable resistance to many corrosive agents encountered in domestic and industrial use. The low carbon content provides good corrosion resistance in welded construction where subsequent solution heat treatment is not practical. It has good heat resistance and maintains its strength at elevated to 800 F. It is a non-magnetic in the annealed condition and not hardenable by heat treatment. Both hardness and tensile strength can be increased by cold working. Because of its lack of magnetism, it is highly desirable for instruments. Intended for use in high pressure hydraulic and pneumatic systems. Tensile strength 85,000 psi Yield 35,000 psi.

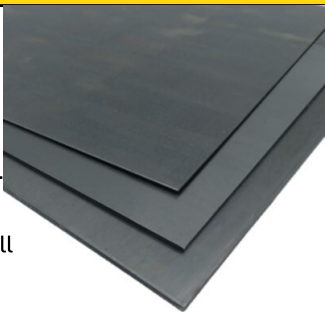


PART#	I.D.	O.D.	WALL	WEIGHT/FT
R1/8X020-304	0.085	1/8	0.020	0.0224
R3/16X035-304	0.118	3/16	0.035	0.0572
R1/4X035-304	0.180	1/4	0.035	0.0804
R3/8X035-304	0.305	3/8	0.035	0.1271
R1/2X035-304	0.430	1/2	0.035	0.1738
R5/8X035-304	0.555	5/8	0.035	0.2205

METALS

4130 CHROMOLY SHEET

Sheets are made from quality steel, melted to meet the rigid standards of the aircraft industry. Carefully rolled and inspected to be free from laminations, tears, pits, blisters and grooves. Specify grain direction on the 9 x 18 sheet. all other sizes run length of grain. Wicks can custom cut up to and including .125 for a nominal fee. All material is condition N.



PART#	THICKNESS	SIZE
SH025X9X9-41	0.025	9" X 9"
SH025X9X18-41	0.025	9" X 18"
SH025X18X18-41	0.025	18" X 18"
SH025X18X24-41	0.025	18" X 24"
SH025X6X36-41	0.025	6" X 36"
SH025X6X72-41	0.025	6" X 72"
SH025X18X36-41	0.025	18" X 36"
SH025X18X72-41	0.025	18" X 72"
SH032X9X9-41	0.032	9" X 9"
SH032X9X18-41	0.032	9" X 18"
SH032X18X18-41	0.032	18" X 18"
SH032X18X24-41	0.032	18" X 24"
SH032X6X36-41	0.032	6" X 36"
SH032X6X72-41	0.032	6" X 72"
SH032X18X36-41	0.032	18" X 36"
SH032X18X72-41	0.032	18" X 72"
SH040X9X9-41	0.040	9" X 9"
SH040X9X18-41	0.040	9" X 18"
SH040X18X18-41	0.040	18" X 18"
SH040X18X24-41	0.040	18" X 24"
SH040X6X36-41	0.040	6" X 36"
SH040X6X72-41	0.040	6" X 72"
SH040X18X36-41	0.040	18" X 36"
SH040X18X72-41	0.040	18" X 72"
SH050X9X9-41	0.050	9" X 9"
SH050X9X18-41	0.050	9" X 18"
SH050X18X18-41	0.050	18" X 18"
SH050X18X24-41	0.050	18" X 24"
SH050X6X36-41	0.050	6" X 36"
SH050X6X72-41	0.050	6" X 72"
SH050X18X36-41	0.050	18" X 36"
SH050X18X72-41	0.050	18" X 72"
SH063X9X9-41	0.063	9" X 9"
SH063X9X18-41	0.063	9" X 18"
SH063X18X18-41	0.063	18" X 18"
SH063X18X24-41	0.063	18" X 24"
SH063X6X36-41	0.063	6" X 36"
SH063X6X72-41	0.063	6" X 72"
SH063X18X36-41	0.063	18" X 36"
SH063X18X72-41	0.063	18" X 72"
SH071X9X9-41	0.071	9" X 9"
SH071X9X18-41	0.071	9" X 18"
SH071X18X18-41	0.071	18" X 18"
SH071X18X24-41	0.071	18" X 24"
SH071X6X36-41	0.071	6" X 36"
SH071X6X72-41	0.071	6" X 72"
SH071X18X36-41	0.071	18" X 36"
SH071X18X72-41	0.071	18" X 72"
SH080X9X9-41	0.080	9" X 9"
SH080X9X18-41	0.080	9" X 18"
SH080X18X18-41	0.080	18" X 18"
SH080X18X24-41	0.080	18" X 24"
SH080X6X36-41	0.080	6" X 36"
SH080X6X72-41	0.080	6" X 72"
SH080X18X36-41	0.080	18" X 36"
SH080X18X72-41	0.080	18" X 72"

4130 CHROMOLY SHEET

PART#	THICKNESS	SIZE
SH090X9X9-41	0.090	9" X 9"
SH090X9X18-41	0.090	9" X 18"
SH090X18X18-41	0.090	18" X 18"
SH090X18X24-41	0.090	18" X 24"
SH090X6X36-41	0.090	6" X 36"
SH090X6X72-41	0.090	6" X 72"
SH090X18X36-41	0.090	18" X 36"
SH090X18X72-41	0.090	18" X 72"
SH100X9X9-41	0.100	9" X 9"
SH100X9X18-41	0.100	9" X 18"
SH100X18X18-41	0.100	18" X 18"
SH100X18X24-41	0.100	18" X 24"
SH100X6X36-41	0.100	6" X 36"
SH100X6X72-41	0.100	6" X 72"
SH100X18X36-41	0.100	18" X 36"
SH100X18X72-41	0.100	18" X 72"
SH125X9X9-41	0.125	9" X 9"
SH125X9X18-41	0.125	9" X 18"
SH125X18X18-41	0.125	18" X 18"
SH125X18X24-41	0.125	18" X 24"
SH125X6X36-41	0.125	6" X 36"
SH125X6X72-41	0.125	6" X 72"
SH125X18X36-41	0.125	18" X 36"
SH125X18X72-41	0.125	18" X 72"
SH190X9X9-41	0.190	9" X 9"
SH190X9X18-41	0.190	9" X 18"
SH190X18X18-41	0.190	18" X 18"
SH190X18X24-41	0.190	18" X 24"
SH190X6X36-41	0.190	6" X 36"
SH190X6X72-41	0.190	6" X 72"
SH190X18X36-41	0.190	18" X 36"
SH190X18X72-41	0.190	18" X 72"
SH250X9X9-41	0.250	9" X 9"
SH250X9X18-41	0.250	9" X 18"
SH250X18X18-41	0.250	18" X 18"
SH250X18X24-41	0.250	18" X 24"
SH250X6X36-41	0.250	6" X 36"
SH250X6X72-41	0.250	6" X 72"
SH250X18X36-41	0.250	18" X 36"
SH250X18X72-41	0.250	18" X 72"

321 STAINLESS STEEL TUBING

Round, seamless, welded and drawn annealed stainless tubing. MIL-T-8808 is intended for use in high pressure hydraulic and pneumatic systems where corrosion and heat resistance are required and in which welding or brazing may be involved during fabrication. Resists oxidation at temperatures 1200 F but is useful at the temperature only when stresses are low. Aircraft hydraulic quality, tensile 90,000 psi, yield 35,000 psi.

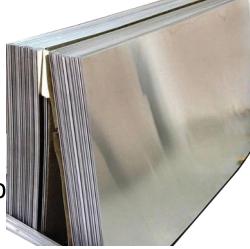


PART#	I.D.	O.D.	WALL	WEIGHT/FT
R1-1/4X028-321	1.194	1-1/4	0.028	0.4541
R1-1/2X035-321	1.430	1-1/2	0.035	0.5476
R2X035-321	1.930	2	0.035	0.7345

METALS

2024 T3 ALUMINUM SHEET

2024T3 sheet has same characteristics as tubing, however, the sheet is alclad for corrosion resistance. Alclad is a metallurgically bonded aluminum or aluminum alloy coating that is anodic to the core, thus electrolytically protecting the core against corrosion. Tensile strength 70,000 psi, yield strength 50,000 psi. Sheets .032 and under may be rolled for UPS.



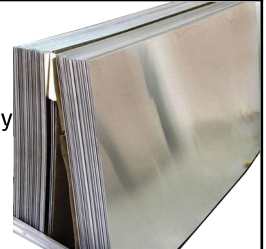
PART#	THICKNESS	SIZE
SH016X4X12-T3	0.016	4' X 12'
SH016X4X8-T3	0.016	4' X 8'
SH016X4X6-T3	0.016	4' X 6'
SH016X4X4-T3	0.016	4' X 4'
SH016X2X4-T3	0.016	2' X 4'
SH016X2X2-T3	0.016	2' X 2'
SH020X4X12-T3	0.020	4' X 12'
SH020X4X8-T3	0.020	4' X 8'
SH020X4X6-T3	0.020	4' X 6'
SH020X4X4-T3	0.020	4' X 4'
SH020X2X4-T3	0.020	2' X 4'
SH020X2X2-T3	0.020	2' X 2'
SH025X4X12-T3	0.025	4' X 12'
SH025X4X8-T3	0.025	4' X 8'
SH025X4X6-T3	0.025	4' X 6'
SH025X4X4-T3	0.025	4' X 4'
SH025X2X4-T3	0.025	2' X 4'
SH025X2X2-T3	0.025	2' X 2'
SH032X4X12-T3	0.032	4' X 12'
SH032X4X8-T3	0.032	4' X 8'
SH032X4X6-T3	0.032	4' X 6'
SH032X4X4-T3	0.032	4' X 4'
SH032X2X4-T3	0.032	2' X 4'
SH032X2X2-T3	0.032	2' X 2'
SH040X4X12-T3	0.040	4' X 12'
SH040X4X8-T3	0.040	4' X 8'
SH040X4X6-T3	0.040	4' X 6'
SH040X4X4-T3	0.040	4' X 4'
SH040X2X4-T3	0.040	2' X 4'
SH040X2X2-T3	0.040	2' X 2'
SH050X4X12-T3	0.050	4' X 12'
SH050X4X8-T3	0.050	4' X 8'
SH050X4X6-T3	0.050	4' X 6'
SH050X4X4-T3	0.050	4' X 4'
SH050X2X4-T3	0.050	2' X 4'
SH050X2X2-T3	0.050	2' X 2'
SH063X4X12-T3	0.063	4' X 12'
SH063X4X8-T3	0.063	4' X 8'
SH063X4X6-T3	0.063	4' X 6'
SH063X4X4-T3	0.063	4' X 4'
SH063X2X4-T3	0.063	2' X 4'
SH063X2X2-T3	0.063	2' X 2'
SH071X4X12-T3	0.071	4' X 12'
SH071X4X8-T3	0.071	4' X 8'
SH071X4X6-T3	0.071	4' X 6'
SH071X4X4-T3	0.071	4' X 4'
SH071X2X4-T3	0.071	2' X 4'
SH071X2X2-T3	0.071	2' X 2'
SH080X4X12-T3	0.080	4' X 12'
SH080X4X8-T3	0.080	4' X 8'
SH080X4X6-T3	0.080	4' X 6'
SH080X4X4-T3	0.080	4' X 4'
SH080X2X4-T3	0.080	2' X 4'
SH080X2X2-T3	0.080	2' X 2'
SH090X4X12-T3	0.090	4' X 12'
SH090X4X8-T3	0.090	4' X 8'

2024 T3 ALUMINUM SHEET

PART#	THICKNESS	SIZE
SH090X4X6-T3	0.090	4' X 6'
SH090X4X4-T3	0.090	4' X 4'
SH090X2X4-T3	0.090	2' X 4'
SH090X2X2-T3	0.090	2' X 2'
SH100X4X12-T3	0.100	4' X 12'
SH100X4X8-T3	0.100	4' X 8'
SH100X4X6-T3	0.100	4' X 6'
SH100X4X4-T3	0.100	4' X 4'
SH100X2X4-T3	0.100	2' X 4'
SH100X2X2-T3	0.100	2' X 2'
SH125X4X12-T3	0.125	4' X 12'
SH125X4X8-T3	0.125	4' X 8'
SH125X4X6-T3	0.125	4' X 6'
SH125X4X4-T3	0.125	4' X 4'
SH125X2X4-T3	0.125	2' X 4'
SH125X2X2-T3	0.125	2' X 2'
SH190X4X12-T3	0.190	4' X 12'
SH190X4X8-T3	0.190	4' X 8'
SH190X4X6-T3	0.190	4' X 6'
SH190X4X4-T3	0.190	4' X 4'
SH190X2X4-T3	0.190	2' X 4'
SH190X2X2-T3	0.190	2' X 2'
SH250X4X12-T3	0.250	4' X 12'
SH250X4X8-T3	0.250	4' X 8'
SH250X4X6-T3	0.250	4' X 6'
SH250X4X4-T3	0.250	4' X 4'
SH250X2X4-T3	0.250	2' X 4'
SH250X2X2-T3	0.250	2' X 2'

2024-0 ALUMINUM SHEET

2024-0 aluminum sheet has high strength and excellent fatigue resistance, with the same characteristics as tubing. Tensile strength 27,000 psi Yield strength, 11,000 psi. .125 is bare. Sheets .032 and under may be rolled for UPS.

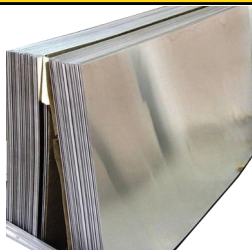


PART#	THICKNESS	SIZE
SH020X4X12-2024-0	0.020	4' X 12'
SH020X4X8-2024-0	0.020	4' X 8'
SH020X4X6-2024-0	0.020	4' X 6'
SH020X4X4-2024-0	0.020	4' X 4'
SH020X2X4-2024-0	0.020	2' X 4'
SH020X2X2-2024-0	0.020	2' X 2'
SH025X4X12-2024-0	0.025	4' X 12'
SH025X4X8-2024-0	0.025	4' X 8'
SH025X4X6-2024-0	0.025	4' X 6'
SH025X4X4-2024-0	0.025	4' X 4'
SH025X2X4-2024-0	0.025	2' X 4'
SH025X2X2-2024-0	0.025	2' X 2'
SH032X4X12-2024-0	0.032	4' X 12'
SH032X4X8-2024-0	0.032	4' X 8'
SH032X4X6-2024-0	0.032	4' X 6'
SH032X4X4-2024-0	0.032	4' X 4'
SH032X2X4-2024-0	0.032	2' X 4'
SH032X2X2-2024-0	0.032	2' X 2'
SH125X4X12-2024-0	0.125	4' X 12'
SH125X4X8-2024-0	0.125	4' X 8'
SH125X4X6-2024-0	0.125	4' X 6'
SH125X4X4-2024-0	0.125	4' X 4'
SH125X2X4-2024-0	0.125	2' X 4'
SH125X2X2-2024-0	0.125	2' X 2'

METALS

6061 T6 ALUMINUM SHEET

Bare aluminum sheet has tensile strength: 42,000 psi, yield strength: 37,000 psi. This grade is used of a wide variety of products and applications from truck bodies and frames to screw machine parts and structural components. Sheet .032 and under may be rolled for UPS shipping. Rolled sheet is not returnable. Has PVC covering on one side. Please note crating fees.



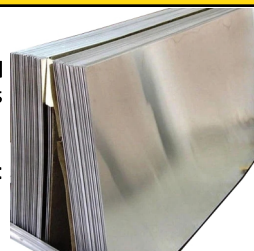
PART#	THICKNESS	SIZE
SH016X4X12-T6	0.016	4' X 12'
SH016X4X8-T6	0.016	4' X 8'
SH016X4X6-T6	0.016	4' X 6'
SH016X4X4-T6	0.016	4' X 4'
SH016X2X4-T6	0.016	2' X 4'
SH016X2X2-T6	0.016	2' X 2'
SH020X4X12-T6	0.020	4' X 12'
SH020X4X8-T6	0.020	4' X 8'
SH020X4X6-T6	0.020	4' X 6'
SH020X4X4-T6	0.020	4' X 4'
SH020X2X4-T6	0.020	2' X 4'
SH020X2X2-T6	0.020	2' X 2'
SH025X4X12-T6	0.025	4' X 12'
SH025X4X8-T6	0.025	4' X 8'
SH025X4X6-T6	0.025	4' X 6'
SH025X4X4-T6	0.025	4' X 4'
SH025X2X4-T6	0.025	2' X 4'
SH025X2X2-T6	0.025	2' X 2'
SH032X4X12-T6	0.032	4' X 12'
SH032X4X8-T6	0.032	4' X 8'
SH032X4X6-T6	0.032	4' X 6'
SH032X4X4-T6	0.032	4' X 4'
SH032X2X4-T6	0.032	2' X 4'
SH032X2X2-T6	0.032	2' X 2'
SH040X4X12-T6	0.040	4' X 12'
SH040X4X8-T6	0.040	4' X 8'
SH040X4X6-T6	0.040	4' X 6'
SH040X4X4-T6	0.040	4' X 4'
SH040X2X4-T6	0.040	2' X 4'
SH040X2X2-T6	0.040	2' X 2'
SH050X4X12-T6	0.050	4' X 12'
SH050X4X8-T6	0.050	4' X 8'
SH050X4X6-T6	0.050	4' X 6'
SH050X4X4-T6	0.050	4' X 4'
SH050X2X4-T6	0.050	2' X 4'
SH050X2X2-T6	0.050	2' X 2'
SH063X4X12-T6	0.063	4' X 12'
SH063X4X8-T6	0.063	4' X 8'
SH063X4X6-T6	0.063	4' X 6'
SH063X4X4-T6	0.063	4' X 4'
SH063X2X4-T6	0.063	2' X 4'
SH063X2X2-T6	0.063	2' X 2'
SH080X4X12-T6	0.080	4' X 12'
SH080X4X8-T6	0.080	4' X 8'
SH080X4X6-T6	0.080	4' X 6'
SH080X4X4-T6	0.080	4' X 4'
SH080X2X4-T6	0.080	2' X 4'
SH080X2X2-T6	0.080	2' X 2'
SH090X4X12-T6	0.090	4' X 12'
SH090X4X8-T6	0.090	4' X 8'
SH090X4X6-T6	0.090	4' X 6'
SH090X4X4-T6	0.090	4' X 4'
SH090X2X4-T6	0.090	2' X 4'
SH090X2X2-T6	0.090	2' X 2'

6061 T6 ALUMINUM SHEET

PART#	THICKNESS	SIZE
SH100X4X12-T6	0.100	4' X 12'
SH100X4X8-T6	0.100	4' X 8'
SH100X4X6-T6	0.100	4' X 6'
SH100X4X4-T6	0.100	4' X 4'
SH100X2X4-T6	0.100	2' X 4'
SH100X2X2-T6	0.100	2' X 2'
SH125X4X12-T6	0.125	4' X 12'
SH125X4X8-T6	0.125	4' X 8'
SH125X4X6-T6	0.125	4' X 6'
SH125X4X4-T6	0.125	4' X 4'
SH125X2X4-T6	0.125	2' X 4'
SH125X2X2-T6	0.125	2' X 2'
SH160X4X12-T6	0.160	4' X 12'
SH160X4X8-T6	0.160	4' X 8'
SH160X4X6-T6	0.160	4' X 6'
SH160X4X4-T6	0.160	4' X 4'
SH160X2X4-T6	0.160	2' X 4'
SH160X2X2-T6	0.160	2' X 2'
SH190X4X12-T6	0.190	4' X 12'
SH190X4X8-T6	0.190	4' X 8'
SH190X4X6-T6	0.190	4' X 6'
SH190X4X4-T6	0.190	4' X 4'
SH190X2X4-T6	0.190	2' X 4'
SH190X2X2-T6	0.190	2' X 2'

6061-0 ALUMINUM SHEET

Sheet has same characteristics as tubing; However, the sheet is alclad for corrosion resistance. Alclad is metallurgically bonded aluminum or aluminum alloy coating that is anodic to the core, thus electrolytically protecting the core against corrosion. Tensile strength: 18,000 psi, yield strength: 8,000 psi. Sheets .032 and under may be rolled for UPS shipping. Any rolled sheet is not returnable. Has PVC covering on one side.

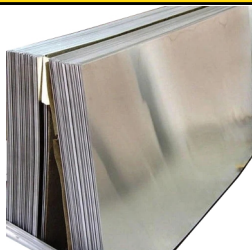


PART#	THICKNESS	SIZE
SH032X4X12-2024-0	0.032	4' X 12'
SH032X4X8-2024-0	0.032	4' X 8'
SH032X4X6-2024-0	0.032	4' X 6'
SH032X4X4-2024-0	0.032	4' X 4'
SH032X2X4-2024-0	0.032	2' X 4'
SH032X2X2-2024-0	0.032	2' X 2'
SH040X4X12-2024-0	0.040	4' X 12'
SH040X4X8-2024-0	0.040	4' X 8'
SH040X4X6-2024-0	0.040	4' X 6'
SH040X4X4-2024-0	0.040	4' X 4'
SH040X2X4-2024-0	0.040	2' X 4'
SH040X2X2-2024-0	0.040	2' X 2'
SH050X4X12-2024-0	0.050	4' X 12'
SH050X4X8-2024-0	0.050	4' X 8'
SH050X4X6-2024-0	0.050	4' X 6'
SH050X4X4-2024-0	0.050	4' X 4'
SH050X2X4-2024-0	0.050	2' X 4'
SH050X2X2-2024-0	0.050	2' X 2'

METALS

7075 T6 ALUMINUM SHEET

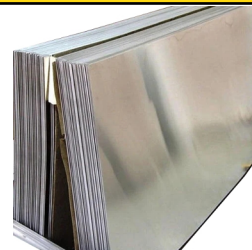
This is one of the highest strength aluminum alloys available. Its strength-to-weight ratio is excellent, and it is ideally used for highly stressed parts. Available in the alclad form to provide corrosion resistance with the over-all high strength being only moderately affected. 7075 conforms to Federal specification QQ-A225/9C. Rolled sheet is not returnable.



PART#	THICKNESS	SIZE
SH025X4X12-70-T6	0.025	4' X 12'
SH025X4X8-70-T6	0.025	4' X 8'
SH025X4X6-70-T6	0.025	4' X 6'
SH025X4X4-70-T6	0.025	4' X 4'
SH025X2X4-70-T6	0.025	2' X 4'
SH025X2X2-70-T6	0.025	2' X 2'
SH032X4X12-70-T6	0.032	4' X 12'
SH032X4X8-70-T6	0.032	4' X 8'
SH032X4X6-70-T6	0.032	4' X 6'
SH032X4X4-70-T6	0.032	4' X 4'
SH032X2X4-70-T6	0.032	2' X 4'
SH032X2X2-70-T6	0.032	2' X 2'
SH040X4X12-70-T6	0.040	4' X 12'
SH040X4X8-70-T6	0.040	4' X 8'
SH040X4X6-70-T6	0.040	4' X 6'
SH040X4X4-70-T6	0.040	4' X 4'
SH040X2X4-70-T6	0.040	2' X 4'
SH040X2X2-70-T6	0.040	2' X 2'
SH050X4X12-70-T6	0.050	4' X 12'
SH050X4X8-70-T6	0.050	4' X 8'
SH050X4X6-70-T6	0.050	4' X 6'
SH050X4X4-70-T6	0.050	4' X 4'
SH050X2X4-70-T6	0.050	2' X 4'
SH050X2X2-70-T6	0.050	2' X 2'
SH063X4X12-70-T6	0.063	4' X 12'
SH063X4X8-70-T6	0.063	4' X 8'
SH063X4X6-70-T6	0.063	4' X 6'
SH063X4X4-70-T6	0.063	4' X 4'
SH063X2X4-70-T6	0.063	2' X 4'
SH063X2X2-70-T6	0.063	2' X 2'
SH125X4X12-70-T6	0.125	4' X 12'
SH125X4X8-70-T6	0.125	4' X 8'
SH125X4X6-70-T6	0.125	4' X 6'
SH125X4X4-70-T6	0.125	4' X 4'
SH125X2X4-70-T6	0.125	2' X 4'
SH125X2X2-70-T6	0.125	2' X 2'

5052-H32 ALUMINUM SHEET

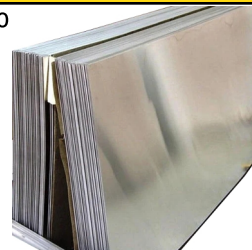
Tensile strength: 35,000 psi, yield strength: 30,000 psi. Sheets .032 and under may be rolled for UPS shipping. Any rolled sheet is not returnable. Has PVC covering on one side.



PART#	THICKNESS	SIZE
SH032X4X12-5052H	0.032	4' X 12'
SH032X4X8-5052H	0.032	4' X 8'
SH032X4X6-5052H	0.032	4' X 6'
SH032X4X4-5052H	0.032	4' X 4'
SH032X2X4-5052H	0.032	2' X 4'
SH032X2X2-5052H	0.032	2' X 2'
SH040X4X12-5052H	0.040	4' X 12'
SH040X4X8-5052H	0.040	4' X 8'
SH040X4X6-5052H	0.040	4' X 6'
SH040X4X4-5052H	0.040	4' X 4'
SH040X2X4-5052H	0.040	2' X 4'
SH040X2X2-5052H	0.040	2' X 2'
SH050X4X12-5052H	0.050	4' X 12'
SH050X4X8-5052H	0.050	4' X 8'
SH050X4X6-5052H	0.050	4' X 6'
SH050X4X4-5052H	0.050	4' X 4'
SH050X2X4-5052H	0.050	2' X 4'
SH050X2X2-5052H	0.050	2' X 2'

3003-H14 ALUMINUM SHEET

Has all the excellent characteristics of 1100 with higher strength. Excellent corrosion resistance and workability, it may be deep drawn, spun, welded or brazed. Alloy in non-heat treatable. Bare, QQ-A-250/2 tensile strength 22,000 psi, yield strength 21,000 psi.



PART#	THICKNESS	SIZE
SH032X4X12-3003	0.032	4' X 12'
SH032X4X8-3003	0.032	4' X 8'
SH032X4X6-3003	0.032	4' X 6'
SH032X4X4-3003	0.032	4' X 4'
SH032X2X4-3003	0.032	2' X 4'
SH032X2X2-3003	0.032	2' X 2'
SH040X4X12-3003	0.040	4' X 12'
SH040X4X8-3003	0.040	4' X 8'
SH040X4X6-3003	0.040	4' X 6'
SH040X4X4-3003	0.040	4' X 4'
SH040X2X4-3003	0.040	2' X 4'
SH040X2X2-3003	0.040	2' X 2'
SH050X4X12-3003	0.050	4' X 12'
SH050X4X8-3003	0.050	4' X 8'
SH050X4X6-3003	0.050	4' X 6'
SH050X4X4-3003	0.050	4' X 4'
SH050X2X4-3003	0.050	2' X 4'
SH050X2X2-3003	0.050	2' X 2'

METALS

6061 T6 ALUMINUM TUBING

6061-T6 bare obtains its full properties by artificial aging. It is weldable by all methods and can be furnace brazed. Offers good range of mechanical properties and can be fabricated by most of the commonly used techniques. Tensile strength 45,000 psi. Yield strength 40,000 psi. Not anodized.



PART#	O.D.	WALL	I.D.	WEIGHT/FT
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R1/4X035-T6	1/4	0.035	0.1800	0.0281
R1/4X065-T6	1/4	0.065	0.1200	0.1040
R5/16X035-T6	5/16	0.035	0.2430	0.0366
R5/16X049-T6	5/16	0.049	0.2150	0.0477
R5/16X058-T6	5/16	0.058	0.1970	0.0580
R3/8X028-T6	3/8	0.028	0.3190	0.0356
R3/8X035-T6	3/8	0.035	0.3050	0.0449
R3/8X058-T6	3/8	0.058	0.2590	0.0694
R3/8X065-T6	3/8	0.065	0.2490	0.0999
R7/16X065-T6	7/16	0.065	0.3070	0.0896
R1/2X028-T6	1/2	0.028	0.4440	0.0496
R1/2X035-T6	1/2	0.035	0.4300	0.0612
R1/2X049-T6	1/2	0.049	0.4020	0.0816
R1/2X058-T6	1/2	0.058	0.3840	0.0962
R1/2X065-T6	1/2	0.065	0.3700	0.1040
R1/2X120-T6	1/2	0.120	0.2600	0.1680
R5/8X035-T6	5/8	0.035	0.5550	0.0775
R5/8X058-T6	5/8	0.058	0.5090	0.1220
R5/8X065-T6	5/8	0.065	0.4950	0.1340
R5/8X156-T6	5/8	0.156	0.3130	0.3703
R3/4X035-T6	3/4	0.035	0.6800	0.0930
R3/4X049-T6	3/4	0.049	0.6520	0.1250
R3/4X058-T6	3/4	0.058	0.6340	0.1506
R3/4X065-T6	3/4	0.065	0.6200	0.1640
R3/4X083-T6	3/4	0.083	0.5840	0.2830
R7/8X035-T6	7/8	0.035	0.8050	0.1090
R7/8X049-T6	7/8	0.049	0.7770	0.1500
R7/8X058-T6	7/8	0.058	0.7590	0.1750
R7/8X065-T6	7/8	0.065	0.7450	0.1940
R7/8X120-T6	7/8	0.120	0.6350	0.3390
R1X035-T6	1	0.035	0.9300	0.1248
R1X049-T6	1	0.049	0.9020	0.1720
R1X058-T6	1	0.058	0.8840	0.2060
R1X065-T6	1	0.065	0.8700	0.2250
R1X083-T6	1	0.083	0.8300	0.2810
R1X095-T6	1	0.095	0.8100	0.3180
R1X120-T6	1	0.120	0.7500	0.4040
R1X250-T6	1	0.250	0.5000	0.6930
R1-1/8X049-T6	1-1/8	0.049	1.0270	0.1850
R1-1/8X058-T6	1-1/8	0.058	1.0090	0.2290
R1-1/8X125-T6	1-1/8	0.125	0.8850	0.4618
R1-1/4X035-T6	1-1/4	0.035	1.1800	0.1570
R1-1/4X049-T6	1-1/4	0.049	1.1520	0.2213
R1-1/4X058-T6	1-1/4	0.058	1.1340	0.2601
R1-1/4X065-T6	1-1/4	0.065	1.1200	0.2845
R1-1/4X125-T6	1-1/4	0.125	1.0000	0.5275
R1-3/8X035-T6	1-3/8	0.035	1.3050	0.1506
R1-3/8X058-T6	1-3/8	0.058	1.2590	0.2822
R1-1/2X035-T6	1-1/2	0.035	1.4300	0.1523
R1-1/2X049-T6	1-1/2	0.049	1.4020	0.2683
R1-1/2X058-T6	1-1/2	0.058	1.3840	0.3137
R1-1/2X065-T6	1-1/2	0.065	1.3700	0.3519
R1-1/2X250-T6	1-1/2	0.250	1.0000	0.1730
R1-5/8X058-T6	1-5/8	0.058	1.5090	0.3409
R1-5/8X125-T6	1-5/8	0.125	1.3750	0.7035
R1-3/4X035-T6	1-3/4	0.035	1.6800	0.2264
R1-3/4X049-T6	1-3/4	0.049	1.6520	0.3142
R1-3/4X058-T6	1-3/4	0.058	1.6340	0.3703
R1-3/4X083-T6	1-3/4	0.083	1.5840	0.5202

6061 T6 ALUMINUM TUBING

PART#	O.D.	WALL	I.D.	WEIGHT
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R1-7/8X058-T6	1-7/8	0.058	1.7590	0.3954
R2X049-T6	2	0.049	1.9020	0.3601
R2X058-T6	2	0.058	1.8840	0.4160
R2X065-T6	2	0.065	1.8700	0.4743
R2-1/4X049-T6	2-1/4	0.049	2.1520	0.4060
R2-1/4X065-T6	2-1/4	0.065	2.1200	0.5328
R2-1/4X125-T6	2-1/4	0.125	2.0100	0.9990
R2-1/2X035-T6	2-1/2	0.035	2.4300	1.3254
R2-1/2X049-T6	2-1/2	0.049	2.4020	0.4440
R2-1/2X065-T6	2-1/2	0.065	2.3700	0.5847
R3X065-T6	3	0.065	2.8700	0.7140
R4X049-T6	4	0.049	3.9020	0.7263
R5X065-T6	5	0.065	4.8700	1.2030

2024 T3 ALUMINUM TUBING

2024T3 round tubing has high strength and excellent fatigue resistance which is used to advantage on structures and parts where a good strength-to-weight ratio is desired. Arc or gas welding is generally NOT recommended; although this alloy may be spot, seam or flash welded. Tubing is wrought – meaning neither anodized nor alclad. Maximum length 12 ft.

Can be cut to length. Cutting fees will apply. Any length longer than 8 ft will not ship UPS.



PART#	O.D.	WALL	I.D.	WEIGHT/FT
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R5/16X049-T3	5/16	0.049	0.220	0.0366
R5/16X065-T3	5/16	0.065	0.182	0.0487
R3/8X035-T3	3/8	0.035	0.305	0.0449
R3/8X049-T3	3/8	0.049	0.277	0.0602
R3/8X065-T3	3/8	0.065	0.245	0.0798
R1/2X035-T3	1/2	0.035	0.430	0.0612
R1/2X049-T3	1/2	0.049	0.402	0.0829
R1/2X058-T3	1/2	0.058	0.384	0.0970
R1/2X065-T3	1/2	0.065	0.370	0.1061
R5/8X035-T3	5/8	0.035	0.555	0.0775
R5/8X049-T3	5/8	0.049	0.527	0.1060
R5/8X065-T3	5/8	0.065	0.495	0.1367
R3/4X035-T3	3/4	0.035	0.680	0.0938
R3/4X049-T3	3/4	0.049	0.652	0.1288
R3/4X065-T3	3/4	0.065	0.620	0.1670
R7/8X049-T3	7/8	0.049	0.777	0.1530
R7/8X065-T3	7/8	0.065	0.745	0.1979
R1X035-T3	1	0.035	0.930	0.1250
R1X049-T3	1	0.049	0.902	0.1754
R1X058-T3	1	0.058	0.884	0.2076
R1X065-T3	1	0.065	0.870	0.2295
R1X095-T3	1	0.095	0.810	0.3244
R1-1/4X049-T3	1-1/4	0.049	1.152	0.2213
R1-1/2X065-T3	1-1/2	0.065	1.370	0.3519
R1-1/2X250-T3	1-1/2	0.250	1.000	1.1730
R1-3/4X250-T3	1-3/4	0.250	1.250	1.7210

METALS

5052-0 ALUMINUM TUBING

5052-0 has the highest strength alloy of the more common non heat treatable grades. Fatigue strength is higher than most aluminum alloys, in addition to good resistance to marine atmosphere and salt water corrosion. Has excellent workability which may be drawn or formed into intricate shapes. Its slightly greater strength in the annealed condition minimizes tearing that occurs in 3003. Can be deep drawn or spun, welded or brazed. Most always used for fuel and hydraulic lines. Tubing comes in 12 ft lengths, but can be cut to size, the 1/8 through 1/4 may be rolled for UPS shipping, however each rolling work hardens the tubing. Rolled tubing may NOT be returned. 8 ft maximum length shipped UPS.



PART#	O.D.	WALL	I.D.	WEIGHT/FT
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R3/16X035-50	3/16	.035	.118	.0168
R1/4X035-50	1/4	.035	.180	.0281
R1/4X049-50	1/4	.049	.152	.0371
R5/16X035-50	5/16	.035	.243	.0360
R3/8X035-50	3/8	.035	.305	.0449
R3/8X049-50	3/8	.049	.277	.0602
R1/2X035-50	1/2	.035	.430	.0612
R1/2X049-50	1/2	.049	.402	.0829
R5/8X035-50	5/8	.035	.555	.0755
R5/8X049-50	5/8	.049	.527	.1060
R3/4X035-50	3/4	.035	.680	.0938
R3/4X049-50	3/4	.049	.652	.1288
R1X049-50	1	.049	.902	.1754

3003-0 ALUMINUM TUBING

3003 aluminum has the same characteristics as 1100, but higher strength. This soft aluminum tubing is essentially commercially pure with the addition of manganese which increases its strength. Has excellent corrosion resistance, workability, which may be deep drawn or spun, welded or brazed. Received in 50 ft lengths and cut to length.



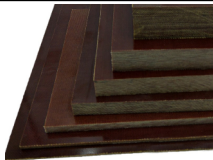
PART#	O.D.	WALL	I.D.	WEIGHT/FT
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R1/8X025-3003-0	1/8	.025	.075	.0092
R3/16X028-3003-0	3/16	.028	.131	.0170
R1/4X032-3003-0	1/4	.032	.186	.0263
R5/16X035-3003-0	5/16	.035	.243	.0360
R3/8X035-3003-0	3/8	.035	.305	.0440
R1/2X035-3003-0	1/2	.035	.430	.0600
R5/8X035-3003-0	5/8	.035	.555	.1100

PLASTICS & LAMINATES

HIGH PRESSURE LAMINATED PHENOLIC

Commonly called Micarta. These laminates combine a base material with epoxy under high heat and pressure to produce a new material with specific characteristics. Meets MIL-P-15035, FBG Medium weave cotton fabric base.



PART#	THICKNESS	SIZE
1/16X48X48-PHEN	1/16"	48" X 48"
1/16X12X12-PHEN	1/16"	12" X 12"
1/16X6X6-PHEN	1/16"	6" X 6"
1/8X48X48-PHEN	1/8"	48" X 48"
1/8X12X12-PHEN	1/8"	12" X 12"
1/8X6X6-PHEN	1/8"	6" X 6"
3/16X48X48-PHEN	3/16"	48" X 48"
3/16X12X12-PHEN	3/16"	12" X 12"
3/16X6X6-PHEN	3/16"	6" X 6"
1/4X48X48-PHEN	1/4"	48" X 48"
1/4X12X12-PHEN	1/4"	12" X 12"
1/4X6X6-PHEN	1/4"	6" X 6"
3/8X6X6-PHEN	3/8"	48" X 48"
3/8X12X12-PHEN	3/8"	12" X 12"
3/8X6X6-PHEN	3/8"	6" X 6"
1/2X48X48-PHEN	1/2"	48" X 48"
1/2X12X12-PHEN	1/2"	12" X 12"
1/2X6X6-PHEN	1/2"	6" X 6"
5/8X48X48-PHEN	5/8"	48" X 48"
5/8X12X12-PHEN	5/8"	12" X 12"
5/8X6X6-PHEN	5/8"	6" X 6"
3/4X48X48-PHEN	3/4"	48" X 48"
3/4X12X12-PHEN	3/4"	12" X 12"
3/4X6X6-PHEN	3/4"	6" X 6"
1X48X48-PHEN	1"	48" X 48"
1X12X12-PHEN	1"	12" X 12"
1X6X6-PHEN	1"	6" X 6"

DELTRIN ROD

Delrin is a thermoplastic acetal resin. The most important attributes of Delrin are high mechanical strength and rigidity, fatigue endurance and high resistance to moisture, gasoline and solvents. Color – Natural. Sold by the foot.



PART#

DRD-3/16
DRD-1/8
DRD-1/4
DRD-5/16
DRD-3/8
DRD-1/2
DRD-5/8
DRD-3/4
DRD-1
DRD-1-1/2
DRD-2

LEXAN PLASTIC SHEET

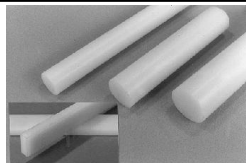
Plastic sheet lexan polycarbonate clear colorless sheet. It's transparency allows it to be used in place of glass, yet a strong, stable material that permits the transmission of light and vision.



PART#	THICKNESS	COLOR
SH062X4X8-TS	1/16"	CLEAR
SH062X4X4-TS	1/16"	CLEAR
SH062X2X4-TS	1/16"	CLEAR
SH125X4X8-TS	1/8"	CLEAR
SH125X4X4-TS	1/8"	CLEAR
SH125X2X4-TS	1/8"	CLEAR
SH062X4X8-GRY	1/16"	GRAY
SH062X4X4-GRY	1/16"	GRAY
SH062X2X4-GRY	1/16"	GRAY
SH125X4X8-GRY	1/8"	GRAY
SH125X4X4-GRY	1/8"	GRAY
SH125X2X4-GRY	1/8"	GRAY

NYLON ROD & BAR

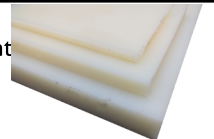
Natural color nylon rod and bar. Sold by the foot.



PART#	SIZE	STYLE
RD1/8-101	1/8"	ROD
RD1/4-101	1/4"	ROD
RD3/8-101	3/8"	ROD
RD1/2-101	1/2"	ROD
RD3/4-101	3/4"	ROD
RD1-101	1"	ROD
RD1-1/4-101	1-1/4"	ROD
RD1-1/2-101	1-1/2"	ROD
RD2-101	2"	ROD
BR381-101	3/8" X 1"	BAR

NYLON PLATE

Natural color nylon plate. Abrasion tests show that Nylon loses less material than do many metals, other plastics, and hard rubber. It can deform under load, then return to its original shape. Nylon retains its impact strength over a wide range of temperatures (-60° to 400°F). It has good resistance to most chemicals.



PART#	THICKNESS	SIZE
1/16X6X6-NP	1/16"	6" X 6"
1/16X6X12-NP	1/16"	6" X 12"
1/16X12X12-NP	1/16"	12" X 12"
1/8X6X6-NP	1/8"	6" X 6"
1/8X6X12-NP	1/8"	6" X 12"
1/8X12X12-NP	1/8"	12" X 12"
1/4X6X6-NP	1/4"	6" X 6"
1/4X6X12-NP	1/4"	6" X 12"
1/4X12X12-NP	1/4"	12" X 12"
1/2X6X6-NP	1/2"	6" X 6"
1/2X6X12-NP	1/2"	6" X 12"
1/2X12X12-NP	1/2"	12" X 12"
3/4X6X6-NP	3/4"	6" X 6"
3/4X6X12-NP	3/4"	6" X 12"
3/4X12X12-NP	3/4"	12" X 12"
1X6X6-NP	1"	6" X 6"
1X6X12-NP	1"	6" X 12"
1X12X12-NP	1"	12" X 12"

PROTECTANTS & SEALANTS

ANTI CORROSION FORMULA

An ultra thin compound, ACF-50 will penetrate tight lap seams, around rivets and screws, between spars and skins. Effective on all metals, cables, switches and avionics. MIL-C-81309 E type II & III.



PART#	SIZE
ACF-50	10 oz

PRECISION AEROSOL TOOL

For those hard to reach areas without getting the product all over everything. Has been tested with hundreds of products to no effect on the plastic. Will not kink even when twisted in a circle.



PART#
AIM-A-SQUIRT

AEROKROIL

The oil that creeps, loosens frozen metal parts, dissolves rust and gummed oil. Supplies lubrication and prevents corrosion without gumming. Silikroil is Kroil with added silicone.



PART#	SIZE
AEROKROIL-10	10 oz
AEROKROIL-16.5	16.5 oz
KROIL-GAL	1 Gallon
SILIKROIL-10	10 oz

LPS LUBRICANTS & RUST INHIBITOR

The LPS1 & 2 are used as both lubricants and penetrants and help protect against wear from friction. The LPS3 is used as a heavy duty rust inhibitor which can protect up to 2 years. Resists salt spray for 500+ hours.



PART#	TYPE
LPS1	LIGHT
LPS2	MEDIUM
LPS3	HEAVY

AVL RUST PROTECTANTS

Excellent water displacing corrosion inhibiting lubricant.



PART#	TYPE
LW-16	LIGHT
MW-16	MEDIUM
HW-16	THICK

MOUSE MILK PENETRATING OIL

A penetrating oil developed for use by the aircraft industry. Penetrates and lubricates nuts, bolts, cables, slides, linkages, etc. Removes rust, gummy accumulations, and other deposits.



PART#	SIZE
MOUSEMILK	8 oz

PAR-AL-KETONE

One of the most rugged corrosion preventatives available. The protective film is stable from -20 deg.F to 180 deg.F.



PART#	SIZE
PAR-AL-KETONE	QUART

CORROSION-X

Featuring the latest advances in Polar Bonding and Fluid Thin Film Coating (FTFC) technologies, CorrosionX Aviation is specially formulated to displace moisture, stop corrosion instantly and provide long-lasting protection. Made entirely in the USA, CorrosionX Aviation is qualified under MIL-PRF-81309 Rev. H Type II for corrosion prevention and control on airframes, as well as MIL-PRF-81309H Type IV for Advanced Corrosion Preventive Compound.



PART#
CORROSION-X

REMOVE BEFORE FLIGHT

REMOVE BEFORE FLIGHT FLAG

Replacement ribbon made of tough vinylized polyester, doubled over at the end and heat sealed with a grommet. Red with white letters.



PART#	SIZE
RBFSM	1" X 11"
RBFLG	2" X 22"

PITOT TUBE COVER

Our bright orange and yellow pitot tube covers work on multiple styles of pitot tubes. The cleverly designed Velcro strap with sewn in rubberized trim allows them to tightly, securely and quickly fasten to virtually any straight, angled, or blade pitot tube.



PART#	STYLE
20632	BLADE
20633	STREAMER
20634	ANGLE
20635	UNIVERSAL
D421211	LARGE ANGLE

TIRES & TUBES

4" TIRES & TUBES

AERO CLASSIC

2.80/2.50-4 4-ply Aero Classic tire. 9" x 3.2". Max load 395 pounds. Order tube TB100-045 sold separately.



PART#

TR100-046

CARLISLE

4.10/3.50-4 4 ply Carlisle tire. 9" x 3.2". Max load 210 pounds. Use tube TB100-050 sold separately.



PART#

SIZE

TR100-050

SPECIALTY TIRE of AMERICA

10x3.50-4 4 ply STA tire. 10" x 2-1/2". Maximum load 450 pounds. Order tube TB100-050 sold separately.



PART#

TR100-018

SPECIALTY TIRE of AMERICA

2.80/2.50-4 4-ply STA tire. 8-1/2" x 2-7/8". Max load 395 pounds. Order tube TB100-045 sold separately.



PART#

TR100-045

FIRESTONE

2.80/2.50-4 90° stem. Use with TR100-045 or TR100-046.



PART#

TB100-045

FIRESTONE

4.10/3.50-4 90° stem. Use with TR100-050.



PART#

TB100-050

5" TIRES & TUBES

CHENG SHIN

11 x 4.00 - 5 6 ply tire. 1820 pound load rating.



PART#

TR100-040

TON KEEP

4.10/3.50 - 5 4 ply tire. Use tube TB100-055 sold separately.



PART#

TR100-055

AERO CLASSIC

11 x 4.00 - 5 8 ply tire. 10-1/2" x 4". Use tube TB100-040 sold separately.



PART#

TR100-011

AIR HAWK

500 x 5 - 6 ply tire. 13-1/2" x 4". Maximum load 1285 pounds. Use tube TB100-030 sold separately.



PART#

TR100-030

CARLISLE

11 x 4.00 - 5 2 ply tire. 11.1" x 4.1". Max load 210 pounds. Use tube TB100-040 sold separately.



PART#

TR100-065

CONDOR

500 x 5 - 6 ply tire. Max load 1285 pounds. Use tube TB100-030 sold separately.



PART#

TR100-105

TIRES & TUBES

5" TIRES & TUBES

MICHELIN AVIATOR

500x 5 - 6 ply tire. max load 1285 pounds. Use tube TB100-030 sold separately.



PART#

MI5X5

5" TUBES

5" tubes.



PART#	SIZE	STEM
TB100-030	5.00x5	90°
TB100-040	11x4.00-5	90°
TB100-055	3.50-5	90°
TB100-050S	4.10/3.50-5	Straight
TB100-010	3.40/3.00-5	90°

6" TIRES & TUBES

AIR TRAC

600 x 6 - 6 ply tire. Max load 1750 pounds. Use tube TB100-060 sold separately.



PART#

TR100-090

6" TIRES & TUBES

AIRHAWK

600x6-6 ply tire. 16" x 5-1/4". Max load 1750 pounds. Use TB100-060 tube sold separately.



PART#

TR100-060

AIRTRAC

15x6.00x6-6 ply tire. 14-1/4" x 5-1/2". Max load 1950 pounds. Use TB100-075 tube sold separately.



PART#

TB100-075

CARLISLE

15x6.00x6-6 ply tire. 13-1/2" x 6-5/8". Max load 570 pounds. Use TB100-070 tube sold separately.



PART#

TB100-070

CONDOR

600 x 6 - 6 ply tire. Max load 1750 pounds. Use TB100-060 tube sold separately.



PART#

TR100-110

MICHELIN AIR

600 x 6 - 8 ply tire. 120 mph rating.



PART#

TR100-125

6" TUBES

6" Tubes



PART#	SIZE	STEM
TB100-035	3.50/4.00-6	90°
TB100-060	6.00x6-6	Straight
TB100-060-90DEG	6.00x6-6	90°
TB100-060-90L	6.00x6-6	90° long
TB100-070	15/6.00x6-6	Straight
TB100-7090	15/6.00x6-6	90°
TB100-075	15/6.00x6-6	Straight
TB100-095	4.10/4.50-6	90°
TB100-115	5.30/4.50-6	90°

MICHELIN AVIATOR

600 x 6 - 6 ply tire. Max load 1750 pounds. Use TB100-060 tube sold separately.



PART#

MI6X6

TON KEEP

13 x 400 x 6 tire. Max load 510 pounds. Use TB100-035 tube sold separately.



PART#

TR100-035

TIRES & TUBES

6" TIRES & TUBES

CARLISLE
4.10/3.50x6 - 6 ply tire. 12-1/4" x 3-3/4". Max load 495 pounds. Use TB100-095 tube sold separately. 
PART#
TR100-095

CARLISLE
13x500x6 - 4 ply tire. 11-3/4" x 4-5/8". Max load 440 pounds. Use TB100-115 tube sold separately. 
PART#
TR100-115

TITAN
8.00x6 - 4 ply tire. 16-1/2" x 6-1/2". Max load 850 pounds. Use TB-MTAT8X6 tube sold separately. 
PART#
TR-MTAT8X6

8" TIRES & TUBES

TON KEEP
4.80/4.00x8 - 4 ply tire. 16-1/2" x 4.7". Max load 520 pounds. Use TB100-080 tube sold separately. 
PART#
TR100-060

8" TUBES	
4.80/4.00x8 tubes	
PART#	STEM
TB100-080	90
TB100-023	Straight

TOOLS

CONTOUR SANDING BLOCK

Interior/Exterior tungsten carbide Perma-Grit sanding block with 32mm internal and external radius surfaces for sanding concave and convex surfaces



PART#	LENGTH	GRIT
CB140F	140mm	Fine 120
CB140C	140mm	Course 60
CB280F	280mm	Fine 120
CB280C	280mm	Course 60
CB560C	560mm	Course 60

PERMA-GRIT ANGLE FILES

Perma-Grit tungsten carbide files. Excellent anywhere there is a 90° angle is needed. The R-201 is 75°, which gives the builder the accuracy needed.



PART #	GRIT
R-201C	Course 60
R-201F	Fine 120

COMFORT GRIP FILES

Perma-Grit tungsten carbide grit file 6.5mm.



PART#	STYLE	GRIT
R-204C	Round	Course 60
R-204F	Round	Fine 120
S-204C	Square	Course 60
S204F	Square	Fine 120

NEEDLE FILE

Perma-Grit tungsten carbide needle files. Range of 5 files, together with Swiss handle, form an extremely versatile set of shaping and finishing tools.



Includes flat, square, triangle, half round, and round files.

PART#
NF1H

FLAT FILES

Perma-Grit tungsten carbide flat hand file. Useful to get into narrow places where a sanding block is unable to fit.



PART#	GRIT
F-101	Fine 120
F-102	Course 60

FLEXIBLE FILES

Perma-Grit tungsten carbide flexible files. One of the most versatile tools. Light and easy making them ideal for any project.



PART#	LENGTH	GRIT
FXT-107	140mm	Course 60
FXT-106	140mm	Fine 120
FXT-104	280mm	Course 60
FXT-103	280mm	Fine 120

INTERNAL GRIT FILES

Perma-Grit tungsten carbide 13mm radius internal curve hand files. Gritted on the internal surface.



PART#	GRIT
R-102	Course 60
R-101	Fine 120

ROUND TUBE FILES

Perma-Grit tungsten carbide files. Round steel tube files. These tools are perfect for fillets, and all concave curves.



PART#	SIZE	GRIT
R-203C	13mm	Course 60
R-203F	13mm	Fine 120
R-202C	19mm	Course 60
R-202F	19mm	Fine 120

SANDING BLOCKS

Perma-Grit tungsten carbide sanding block. Use to create straight edges, square off material, and produce dihedral angles.



Block sand large areas, profile wing leading and trailing edges, etc. Made from anodized aluminum extrusion that is light, easy to handle, and will not warp.

PART#	LENGTH	GRIT
SB140	140mm	Fine/Course
SB280	280mm	Fine/Course
SB280XC/XXC	280mm	X,XX Course
SB560	560mm	Fine/Course
SB840	840mm	Fine/Course

WEDGE BLOCK

Perma-Grit tungsten carbide wedge block. Overall sanding area 140mm x 51mm. Block made with 45° angle to reach into tight corners. Course 60 grit on one side, and Fine 120 grit on the other.



PART#	SIZE
WB140	140mm x 51mm

EXTERNAL GRIP FILES

Perma-Grit tungsten carbide half round 13mm radius files gritted on the external curve.



PART#	GRIT
R-200C	Course 60
R-200F	Fine 120

PERMA-GRIT SET

Perma-Grit tungsten carbide set. This popular set contains flat, round, and angle files to cover most tasks that involve sanding and shaping.



PART#	GRIT
SET8F	Fine 120
SET8C	Course 60

TOOLS

CLEANING KIT

Developed by Deluxe Materials, this is a fast acting, spreadable and controllable cleaner, that will soften and remove contaminants from Perma-Grit tools. Simply apply to tool surface, leave for 5 to 15 minutes, then clean and wash off with wire brush and warm water.



PART#

CK1

ROTARY TOOL SET

Set contains, RF1C, RF2C, RF3C, RF4C, RF5C, RF6C, and RD2.



PART #

GRIT

KT1C

Course 60

ROTARY TOOLS

Perma-Grit rotaries have an integral arbor allowing them to be used in reversible drive tools. Arbor fits Dremel, Proxon, and Flexi-drive tools.



PART#	SIZE	STYLE	GRIT
RD1	19mm	Disc	Course
RD2	32mm	Disc	Course
RD3	19&32	Disc	Course
RF1F	8mm	Narrow Cone	Fine
RF1C	8mm	Narrow Cone	Course
RF2F	16mm	Wide Cone	Fine
RF2C	16mm	Wide Cone	Course
RF5F	7mm	Domehead	Fine
RF5C	7mm	Domehead	Course
RF3F	11mm	Domehead	Fine
RF3C	11mm	Domehead	Course
RF4C	20mm	Drum	Fine
RF4C	20mm	Pancake	Course
RF6F	4mm	Rod	Fine
RF6C	4mm	Rod	Course

ROUND FILE

Round, smooth cutting and untapered file. 8" long.



PART#

LENGTH

F4246A3

8 Inches

SCOTCH BRITE WHEEL 2 X 1"

Scotch-Brite EXL unitized wheels are recommended for deburring carbon steel, aluminum, and composites.



PART#

SIZE

GRIT

2XLUW8A

2"

Medium

SCOTCH BRITE MANDREL

3/16" mandrel for Scotch-Brite wheel.



PART#

936

SCOTCH BRITE 6" WHEEL

Scotch-Brite cut and polish wheel. 6" diameter x 1" thick with 1/2" center hole.



PART#

SIZE

F3753

6 inch

ADEL CLAMP PLIERS

Securely and simply clamps the entire assembly together and leaves the hardware holes lined up.



PART#

ACP

C-CLAMP WITH SWIVEL PAD

6" locking clamp with swivel pads. jaw adjusts from 0" to 2-1/8". Depth is 1-1/2".



PART#

6CLAMP

CLAMP BANDING TOOL

This handy tool tightens and crimps Band-It and Band-It Jr type clamps (such as firesleeve clamps).

Tool is easily disengaged from clamp after tightening.



PART#

FS4623

HANDI-CLAMP

Handi-Clamps are a specially designed tool for clamping various types of surfaces, shapes and thicknesses. Clamps from 0" to 5/16".



PART#

SIZE

HANDI-CLAMP-1.5

1-1/2"

HANDI-CLAMP-1

1"

SPRING CLAMP

Use for holding fabric in place prior to gluing or holding several pieces of sheet metal or wood together. Poly-vinyl jaw tips.



PART#

3202-HT

PAPER MIXING CUPS (SMALL)

Used for mixing small batches of epoxy. 3 ounces. Sold in packs of 100.



PART#

SIZE

444

3 ounces

TOOLS

PAPER MIXING CUPS (MEDIUM)

Used for mixing small batches of epoxy. 8 ounces. Sold in packs of 100.



PART# SIZE

8SN1 8 ounces

PAPER MIXING CUPS (LARGE)

Used for mixing small batches of epoxy. 16 ounces. Sold in packs of 100



PART# SIZE

16SN1 16 Ounces

MIXING STICKS

These 5/8" x 5-1/2" tongue depressors work great for mixing small batches of epoxy. Sold per box of 500.



PART#

805

PLASTIC MIXING CUP

Made of formed plastic, these cups are graduated for easy measurement. 1 ounce. Sold per box of 25.



PART # SIZE

RDMX-CUP-1 1 Ounce

GRAY BRISTLE BRUSH 1"

1" pure gray bristle brush with plastic handle.



PART#

10157

GRAY BRISTLE BRUSH 2"

2" pure gray bristle brush with plastic handle.



PART#

10159

SPREADER

4" X 4" Plastic spreader notched on 3 sides in 1/8", 3/16", and 1/4" increments.



PART#

809

PLY 9 SKIN PROTECTIVE GEL

Put on hands before using epoxy and wash off after finishing work. 12 ounce squeeze bottle.



PART#

PLY-9

BUTYL GLOVES (SMALL)

Ideal for use with ketones, esters, polyesters, and epoxies.



PART#

BG-S

ROTARY PINKING SHEARS

Rotary pinking shears make one continuous pinked edge.

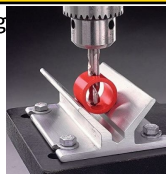


PART #

1000

CENTER-IT HOLE V-BLOCK

Center-It is a tool for drilling tubing and other round objects on a drill press. The V-Block bolts to the drill press table.

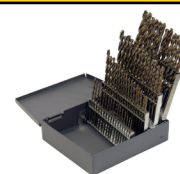


PART#

CI-1

60 PIECE COBALT DRILL BIT SET

Manufactured from premium cobalt high speed steel, increasing heat resistance and extending drill wear life.



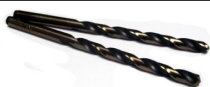
PART#

21125

TOOLS

JOBBER DRILL BITS

High speed drill bits. Flute length 2-1/8", standard spiral. Heavy duty, straight shank. 180° split point.



PART#	SIZE	LENGTH
-------	------	--------

988-12	#12	3"
988-21	#21	3"
988-29	#29	3"
988-30	#30	3"
988-40	#40	3"

6" JOBBER DRILL BITS

Spring tempered, high speed steel, 135° split point.



PART#	SIZE	LENGTH
-------	------	--------

3917-6-40	#40	6"
3917-6-30	#30	6"
3917-6-21	#21	6"
3917-6-12	#12	6"

12" JOBBER DRILL BITS

Spring tempered, high speed steel, 135° split point.



PART#	SIZE	LENGTH
-------	------	--------

3917-12-40	#40	12"
3917-12-30	#30	12"
3917-12-21	#21	12"
3917-12-12	#12	12"
3917-12-3	#3	12"

COBALT JOBBER DRILL BITS

Heavy duty flute design, 135° split point, increased cobalt content drill bits.



PART#	SIZE
-------	------

CD56	#56
CD364	#3/64
CD54	#54
CD50	#50
CD48	#48
CD36	#36

DRILL BITS FOR PLASTICS

These drill bits produce clean, chip free holes in acrylic and other plastics. 60° point 0° rake.



PART#	SIZE
-------	------

1106551	1/4"
1106550	3/16"
1106549	1/8"

PLEXIGLASS DRILL BITS

High speed plastic and laminate drills with self centering point.



PART#	SIZE
-------	------

DR375	3/8"
DR250	1/4"

DRILL STOPS

Drill stops are used to control hole depth. Their spring loaded design cushions material breakthrough.



PART#	SIZE
-------	------

STP313	5/16"
STP250	1/4"
STP10	#10
STP21	#21
STP30	#30
STP40	#40

THREADED SHANK DRILL BITS

1/4-28 threaded shank drill bits. 135° split point.



PART#	SIZE	LENGTH
-------	------	--------

TDL40	#40	2.5"
TDL30	#30	2.5"
TDL21	#21	2.5"
TDL20	#20	2.5"
TDL10	#10	2.5"
296240	#40	1.25"
296230	#30	1.25"
296221	#21	1.25"
296220	#20	1.25"
296210	#10	1.25"

RIVET SHAVER BITS

1/4-28 threaded shaver bit with solid carbide tip. Fits standard micro stop countersink tool.



PART#	SIZE
-------	------

ATS-3000-516	5/16"
ATS-3000-38	3/8"
ATS-3000-716	7/16"
ATS-3000-12	1/2"

PLATE NUT DRILL JIG

Plate nut drill jigs designed for accurate drilling of rivet holes for plate nuts.



PART#	SIZE
-------	------

ATS-518-25	1/4"
ATS-518-10	#10
ATS-518-8	#8
ATS-518-6	#6

INSTRUMENT DRILL JIG

Used for producing quick accurate mounting holes for 2-1/4 and 3-1/8 instruments.



PART#

IJJG

ECONOMY CLECO PLIERS

Used to install and remove Cleco sheet holders. Made of die cast Zamak alloy with steel inserts at all wear points.



PART#

200-SHP-TC

TOOLS

ECONOMY FLUSH RIVET TOOL

These tools are used in conjunction with a rivet gun to set solid countersunk rivets. The .401" shank fits all standard rivet guns.



PART#	LENGTH
TC-209-2.5	2-1/2"
TC-209-5.5	5-1/2"
TC-209-7.5	7-1/2"

ECONOMY RIVET GUNS

A true rivet gun, not an air hammer, designed to install rivets in aircraft, automotive, and metalworking industries.



PART#	SIZE
TC-208-2X	2X
TC-208-3X	3X
TC-208-4X	4X

ECONOMY RIVET TOOL SET

Includes 3/32", 1/8", 5/32", and 3/16" rivet sets. The .401" shanks fit all standard rivet guns.



PART#	STYLE	LENGTH
TC-310-3.5-S	Straight	3.5"
TC-310-3.5-O	Offset	3.5"
TC-310-5.5-S	Straight	5.5"
TC-310-5.5-O	Offset	5.5"
TC-310-7.5-S	Straight	7.5"
TC-310-7.5-O	Offset	7.5"

ECONOMY BUCKING BARS

Made from 4140 steel for durability, with a low cost point. These are a must for any riveting project.



PART#	STYLE
TC-383	
TC-382	
TC-381	
TC-380	

PEENING TOOL

This versatile tool is great for forming sheet metal, driving pins, loosening bolts, etc. Fits all standard .401" tools.



PART#	STYLE
TC-108	Aluminum
TC-109	Nylon

SCREW AND BOLT REMOVER

This tool is used to remove screws, bolts, etc. that are corroded or cannot be loosened by normal means.



PART#
TC-328

ECONOMY RIVET SQUEEZER

5/8" adjustable ram with 1/2" stroke. Made of high quality stainless steel. Uses standard (.187") shank dies.



PART#	SIZE
RS2	2"
RS3	3"

ECONOMY DIMPLE DIE SET

Dimple die set for 3/32", 1/8", 5/32", & 3/16".



PART#
TC-407

ECONOMY CAMLOC PLIERS

Use to install series 2600 2700, and 4002 fasteners. Just compress stud spring with pliers, insert stud into panel and release.



PART#
TC-4P3

ECONOMY MICROSTOP

Adjustable in 0.001" increments. Travel is 9/32". Attaches to any 1/4" chuck. Uses standard 1/4-28 thread cutters 1/2" diameter.



PART#
CMS

ECONOMY MICROSTOP WITH NYLON FACE

The economy microstop uses ball bearings for ultra smooth operation. adjustable in 0.001" increments. Travel is 9/32". Attaches to any 1/4" chuck. Uses standard 1/4-28 thread cutters 1/2" diameter.



PART#
TC-13040

ECONOMY RIVET REMOVAL TOOL

This tool easily and accurately removes rivets by drilling out only the head. Fits any standard 1/4" chuck.



PART#
TC-706

TOOLS

DOGLEG DEBURRING TOOL

The whipping motion from this tool's dogleg shaft will quickly deburr holes, resulting in a smooth tight fit for rivets, screws, etc.



PART#

TC-902

ECONOMY FLUTING PLIERS

Narrow type fluting pliers designed to straighten rib flanges and form curved stringers. This tool makes narrow and precise flutes in sheet.



PART#

TC-101

ECONOMY HAND SEAMER

Has wide, deep jaws machined for smooth parallel fit to form precise folds and seams. 1" deep and 3-1/2" wide.



PART#

TC-44

RIVET HOLDER

Makes for easier installation of rivets in confined spaces.



PART# STYLE

TC-405

ECONOMY RIVET LENGTH GAUGE

One gauge measures -3, -4, -5, & -6 rivets. Used to check length of rivets before setting.



PART#

TC-401

SCREW AND BOLT REMOVER

Set of four gauges for -3, -4, -5, & -6 rivets. Each gauge measures minimum height and diameter after setting.



PART#

TC-402

HEAVY DUTY RIVET CUTTER

This high quality rivet cutter features all steel construction and cuts 1/16" to 1/4" diameter rivets.



PART#

RC130-TC

RED BOX 737

This set comes with the Rivet gun, 3-1/2" straight rivet set, Flush set, 2 bucking bars, Quick-change & beehive retaining springs, Click style brass regulator, Air tool oil, and storage case.



PART#

STYLE

RED BOX 737-2X	2X Rivet Gun Set
RED BOX 737-3X	3X Rivet Gun Set
RED BOX 737-4X	4X Rivet Gun Set

RED BOX DELUXE 777

This set comes with the Rivet gun, 3-1/2" straight rivet set, Flush set, 4 bucking bars, Quick-change & beehive retaining springs, Click style brass regulator, Air tool oil, 1-1/4" flush set, 3-1/2" offset rivet set, and storage case.



PART#

STYLE

RED BOX 777-2X	2X Rivet Gun Set
RED BOX 777-3X	3X Rivet Gun Set
RED BOX 777-4X	4X Rivet Gun Set

3" PRO RIVET SQUEEZER

The handles are formed from .060" thick cold rolled steel tubing to resist bending under heavy pressure. 3" reach, 1-1/2" gap height, 3/16 aluminum rivet capacity. Yoke swivels 360° and can lock in any position.



PART#

5022A

FLUSH RIVET TOOL

Features a slightly crowned face to avoid damage to skin. 3/4" diameter, 3" long, and fits standard .401" rivet guns.



PART#

ATS750-2A

RUBBERGUARD FLUSH SET

1-1/4" diameter rubber guard rivet set. Flush rivet set with rubber boot to prevent damage to metal surface while riveting.



PART#

ATS-12C

TOOLS

FLUSH RIVET SET

Rivet set, straight, 1-1/4" flush, 3-1/2" long. .401" shank.



PART#

ATS94

RUBBER GUARD FLUSH SET

Flush rivet set 3/4" with rubber boot to prevent damage to metal surface while riveting. .401" shank.



PART#

ATS12A

RUBBER GUARD SWIVEL SET

Rubber outer guard cushions edge of set while limiting recoil. Head has 20° swivel. Beehive spring keeps set securely attached to rivet gun. .401" shank.



PART#

ATS-AT106A

BACK RIVET TOOL

Used for back riveting rivets. Spring loaded plastic guard design holds down skin while riveting without damage.



PART#

ATS2470

DIMPLE DIE & RIVET SET

This 15 piece set comes with 1/2" diameter: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", & 1/2" long flush dies, and 100° 3/32, 1/8, #6, & #8 spring back dimple dies.



PART#

DRS20

DIMPLE DIE KIT

A complete set of 3/32", 1/8", 5/32", & 3/16" 100° spring back dimple dies, in polyethylene holder.



PART#

ATS-426DD

SQUEEZER SET MIX

This set includes 3/32", 1/8", 5/32", & 3/16" universal head sets plus flush sets.



PART#

RC130-TC

SPRING BACK DIMPLE DIES

100° surgical stainless steel, heat treated, and polished spring back dimple dies.



PART#

SIZE

DD-3/32	3/32"
DD-1/8	1/8"
DD-632	#6
DD-832	#8
DD-1032	#10

120° DIMPLING TOOL

For up to .040" thick aluminum with 1/8" 120° countersink rivets. Attaches to standard pop rivet gun.



PART#

DT-17014

HEAVY DUTY MICRO STOP

The ball bearing design makes it run much cooler than a standard microstop. Depth adjustable in 0.001" increments. Use with 1/4-28 threaded cutters.



PART#

ATS-133

COUNTERSINK PILOT CUTTERS

1/2" diameter, 1/4-28 thread, 3 flute cutter with integral pilot for cutting accuracy. High speed steel.



PART#

ANGLE

SIZE

ATS-120-40	120°	#40
ATS-120-30	120°	#30
ATS-120-21	120°	#21
ATS-100-40	100°	#40
ATS-100-30	100°	#30
ATS-100-21	100°	#21
ATS-100-12	100°	#12

SAFETY WIRE TWISTER

Twists perfectly every time. These pliers have an automatic spring return.



PART#

LENGTH

STYLE

2W393	6"	Standard
1W393	9"	Standard
RSWT-6	6"	Reversible
RSWT-9	9"	Reversible

TOOLS

100° DIMPLE SET

For dimpling holes with a pop riveter. Forms a perfect dimple every time and can be used over and over.



PART#	SIZE
5102D-3/32	3/32"
5102D-1/8	1/8"

RIVET SETTING TOOLS

3" long, straight, universal head, rivet tools. .401" shank.



PART#	SIZE
ATS4703-1	3/32"
ATS4703-2	1/8"
ATS4703-3	5/32"
ATS4703-4	3/16"
ATS4703-5	1/4"

RIVET TOOL SET

Includes 3/32", 1/8", 5/32", & 3/16" universal rivet tools, as well as tool for flush rivets. .401" shank.



PART#
ATS-120

RIVET CUTTER

Cuts from 3/32" to 1/4" diameter rivets. Uses leaf spacers to precisely set the length of the cut.



PART#
ATS2470

BRAKE RIVET TOOL

Used for relining aircraft brakes and general tubular riveting. Comes with frame, anvil, and punch.



PART#
ATSW-403

EQUAL SPACING TOOL

For locating and quickly marking hole patterns by extending and shortening tool.



PART#
EST-1

CLECO FASTENERS

Holds sheet metal together for riveting. Completely enclosed spring. Use with 200-SHP pliers.



PART#	SIZE	COLOR
AT551X	3/32"	SILVER
AT552X	1/8"	COPPER
AT553X	5/32"	BLACK
AT554X	3/16"	GOLD

CLECO PLIERS

These pliers grip and operate all standard size sheet holders (clecos).



PART#
200-SHP

WASHER WRENCH SET

For getting washers into hard to reach areas. Holds #4, #6, #8, AN3 (#10), AN4 (1/4"), AN5 (5/16"), AN6 (3/8"), AN7 (7/16"), & AN8 (1/2").



PART#
WA1

CAMLOC DRILL JIG

This drill jig provides the proper hole spacing for Camloc fasteners. One end is for the 2600 & 2700 series, while the other is for the 4002 series.



PART#
ATS-MS-T16

HOLE CUTTER

Cuts perfect holes from 2" to 12" diameter up to 1" thick. Ideal for inspection holes or instrument holes. Use with electric drill.



PART#
ATS-HC1

LAP JOINT JOGGLE TOOL

Use for lap joint and inspection hole joggles in aluminum skins up to .032" thick.



Steel handle with adjustment slots and precision ball bearing rollers. adjustable for different thicknesses.

PART#
AE465

TOOLS

SIDE GRIP FASTENER

Use to hold items together that have no holes. 1" reach and 0 - 3/4" grip.



PART#

26-EL

OFFSET HAND SEAMER

Offset design allows for additional leverage. 3-1/4" wide & 1-1/4" throat depth.



PART#

SIZE

TP44-0

HAND SEAMER

Has wide deep jaws machined smooth to form precise folds and seams. 3-1/2" wide & 1" throat depth.



PART#

TP44

COMBINATION SNIPS

14" long aluminum handled snips with heat treated blades for making straight and curved cuts in both directions.



PART#

MC14

SNIPS LEFT & RIGHT

Left and straight cutting snips. Offset blade allows cut material to flow unobstructed past blades.



PART#

ATS-9L

SNIPS RIGHT & STRAIGHT

Right and straight cutting snips. Offset blade allows cut material to flow unobstructed past blades.



PART#

ATS-9R

FLUTING PLIERS

Make narrow and precise flutes for straightening ribs and bulkheads.



PART#

500

CAMLOC PLIERS

Use to install 2600, 2700, & 4002 series camloc fasteners. Just compress stud, insert into panel, and release.



PART#

200-SHP

TERMINAL CRIMPER

Powerful full ratcheting crimper with safety release and adjustable crimp pressure. Can change dies for other types of terminals.



PART#

E300-002

TERMINAL CRIMPER DIES

Crimper dies for terminals, splices, BNC/TNC, and open barrel terminals.



PART#

TYPE

E300-039 OPEN BARREL
E300-038 BNC
E300-058 R/Y/B

3 FLUTE COUNTERSINK

3 flute countersink. 3/8" diameter, 1/4" shank. High speed steel.



PART#

ANGLE

1003-82 82°
1003-100 100°
1003-120 120°

SPEED DEBURRING TOOL

Swivel action makes deburr and countersink holes fast and easy. Dog leg shaft with 1/4-28 threaded holder. Includes 100° cutter.



PART#

1046

TOOLS

THREADED DEBURRING BIT

100° deburring bit
1/4-28 threaded
shank. 3/8"
diameter high
speed steel.



PART#

DB3751

100° 3 FLUTE DEBURRING BIT

100° deburring bit
1/4-28 threaded
shank. 3/8" diameter
high speed steel.



PART#

SIZE

1050

SWIVEL HEAD DEBURRING TOOL

Swivel head provides
easy deburring of
round and uneven
surfaces.



PART#

DB-482

DEBUURING TOOL BLADE

Replacement deburring
tool blade for model
482. Works best on
steel, copper,
aluminum, and plastic.



PART#

DB-482A

DOUBLE EDGE DEBURRING TOOL

Removes burrs from
both sides of work piece
from 1/32" to 1/2" thick.
Blades can be rotated
and reversed for long
life.



PART#

422060

1/8" 3/16" & 1/4" TUBE BENDER

For bending soft
copper, aluminum,
brass, steel, &
stainless. Calibrated
markings for accurate
bends.



PART#

367-FH

1/4" 5/16" & 3/8" TUBE BENDER

For bending soft copper,
aluminum, brass, steel, &
stainless. Calibrated
markings for accurate
bends



PART#

368-FH

IMP TUBE CUTTER

Designed for use in tight
quarters where other
cutters won't fit. Requires
only 1- 1/4" swing radius.



PART#

127-FB

HEAVY DUTY TUBE CUTTER

For hard or soft copper,
aluminum, brass, thin wall
steel, stainless steel, monel,
titanium and other tubing.



PART#

312-FB

BURRAWAY TOOL

Burraway tool
deburrs both sides in
one pass. Set screw
adjustment controls
depth of cut and
releases blade for
replacement.



PART#

SIZE

2938 3/32"
2125 1/8"

CHIP CHASER

Ideal for removing
chips and burrs
from between
metals after drilling
holes. Features
plastic molded
handle and flexible
steel blade.



PART#

LENGTH

CC2 2.5"
CC5 5.5"

12' DECIMAL TAPE MEASURE

12' decimal tape
measure with 1/2"
blade is graduated
in 10th" and
100th" increments.



PART#

61-112

TOOLS

ROLO-FLAIR FLAIRING TOOL

For easy, precise, blemish free 37° flaring of copper, soft steel, and aluminum outside diameters of 1/8" - 3/4".



PART#

212-FB

ROLO-FLAIR REPLACEMENT CONE

Burnishing cone replacement for Rolo-Flair flaring tool.



PART#

642700

SIZE

VINYL BOLT GAUGE

Handy reference for diameter and length of AN bolts.



PART#

BG-1

TUBING SADDLES

Molded from Bayer Durathane 50% glass reinforced nylon, providing excellent strength, and load capacity.



PART#

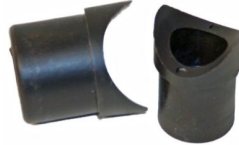
TUBE SIZE

HOLE SIZE

TS6204	1-1/2"	1/4"
TS6205	1"	1/4"
TS6206	1-1/4"	1/4"
TS6216	1"	1/4"

TUBING CONNECTORS

Molded from Bayer Durathane 50% glass reinforced nylon, providing excellent strength, and load capacity.



PART#

TUBE SIZE

TS6207	1-1/4" X .065"
TS6209	1" X .065"

TUBING CROSS SADDLE

Molded from Bayer Durathane 50% glass reinforced nylon, providing excellent strength, and load capacity.



PART#

SIZE

TS6211	1"
--------	----

BRASS COMPASS SCREWDRIVER

Brass screwdriver designed for safe and accurate adjustment of magnetic compasses.



PART#

C906

TOYS & APPAREL

AVIATION KEYCHAINS

Silk screened or embroidered. 6" long with swivel design.



PART#

STYLE

KCERM	EMBROIDERED
KCRM	SILK SCREENED

TUBING & HOSE

BING ALCOHOL RESISTANT FUEL LINE

Bing does not rot or deteriorate from the inside causing clogged carburetor or fuel systems. Withstands constant temps of -65F to +220F. UV resistant.



PART#

SIZE

BAI-1/8	1/8"
BAI-1/4	1/4"

YELLOW TYGON TUBING

Fuel and lubricant tubing developed specifically to handle petroleum based products. Translucent yellow. Flexible.



PART#

SIZE

F4040A-1/8	1/8"
F4040A-1/4	1/4"
F4040A-3/8	3/8"

TYGON TUBING

Flexible, tough, abrasion resistant, & non aging. Ideal for hookup of airspeed and static lines.



PART#

SIZE

B44-3	1/4"
-------	------

TUBING & HOSE

POLYURETHANE TUBING

Flexible polyurethane tubing has greater abrasion and tear resistance than any other type of plastic tubing. Won't age or oxidize. Avoids brittleness down to -100°F. Tensile strength 5900 PSI. Resists weathering, fuels, oils, and many lubricants. Not to be used with Alcohol fuels



PART#	I.D.	O.D.
0585-051	3/16"	5/16"
0585-071	1/4"	3/8"
0585-107	3/8 "	1/2"
0585-135	1/2"	5/8"
0585-165	5/8"	7/8"

NYLAFLOW TUBING

This tubing is suitable for use in oil, air, vacuum, fuel, brake lines, and low pressure hydraulic lines. Type T off white with a burst rating of 1000 PSI. -65°F - +150°F.



PART#	I.D.	O.D.
SK8201-1/8	.096"	1/8"
SK8201-3/16	.138"	3/16"
SK8201-1/4	.190"	1/4"
SK8201-5/16	.242"	5/16"

PARFLEX NYLON TUBING

Replacement deburring tool blade for model 482. Works best on steel, copper, aluminum, and plastic.



PART#	I.D.	O.D.
NNR3	.140"	3/16"
NNR4	.180"	1/4"
NNR6	.279"	3/8"

PARFLEX PE TUBING

Flexible polyethylene tubing for use with air, pitot, and instruments. 480 psi burst. -80°F - +150°F.



PART#	I.D.	O.D.
E43	.170	1/4"
E64	.250	3/8"

CLEAR VINYL TUBING

Clear vinyl flexible tubing has a smooth bore preventing interior build up to provide fine flow characteristics.



PART#	I.D.	O.D.
0500-180	3/4"	1"

WELDING SUPPLIES

TIG FILLER ER308L STAINLESS STEEL

TIG Filler (36" Cut Lengths in 1 lb Containers) USA 308L is similar to USA 308 but contains an average .02% carbon producing a weld deposit with good resistance against intergranular corrosion caused by carbide precipitation. USA 308L is commonly used for welding AISI types 304L, 308L, 321, and 347. Sold by the pound.



PART#	SIZE
-------	------

ER308L-035	.035"
ER308L-045	.045"
ER308L-062	.062"

WELDING ROD

Welding rod sold by the stick.

PART#	SIZE	TYPE
AWR4043-062	.062"	ALUMINUM
AWR4043-090	.090"	ALUMINUM
GWR-1/16	.062"	STEEL OXY/ACTLN
GWR-3/32	.090"	STEEL OXY/ACTLN
SWR347063	.063"	STAINLESS
SWR347090	.090"	STAINLESS
WR-035	.035"	STEEL TIG
WR-1/16	.062"	STEEL TIG
WR-3/32	.090"	STEEL TIG

TIG FILLER ER347 STAINLESS STEEL

USA 347 is used for welding AISI types 304, 304L, 321 and 347 where maximum corrosion resistance is required. USA 347 contains columbium which acts as a stabilizer against carbide precipitation thereby eliminating intergranular corrosion. 36" cut lengths are packaged in 1lb. tubes. Sold by the pound.



PART#	SIZE
-------	------

ER347-035	.035"
ER347-045	.045"
ER347-062	.062"

TIG FILLER ER4043 ALUMINUM

Washington Alloy 4043 (commonly referred to as ALSI5) is a 5% silicon aluminum filler metal that is available in spools or cut lengths for MIG or TIG processes. This alloy is recommended for welding 3003, 3004, 5052, 6061, 6063 and casting alloys 43, 355, 356 and 214. Washington Alloy 4043 has a melting range of 1065-1170oF and a density of .097 lb./cu. in. The post-anodizing color tint is gray. Tensile strength average is 29,000 psi. 36" Cut lengths are packaged in 1lb. tubes. Sold by the pound.



PART#	SIZE
-------	------

ER4043-045	.045"
ER4043-062	.062"

WELDING SUPPLIES

TIG FILLER ER5356 ALUMINUM

Washington Alloy 5356 (commonly referred to as AlMg5) is a 5% magnesium aluminum filler metal that is available for MIG or TIG welding processes. The weld deposit of Washington Alloy 5356 offers much better corrosion resistance when exposed to salt water. Common applications would be base metals 5050, 5052, 5083, 5356, 5454 and 5456. The post-anodizing color tint is white. Tensile strength average is 38,000 psi. 36" Cut lengths are packaged in 1lb. tubes. Sold by the pound.



PART#	SIZE
-------	------

ER5256-045	.045"
ER5356-062	.062"

TIG FILLER ER70S-2 STEEL

ER70S-2 is multiple de-oxidized Plain Carbon Steel that has additions of Zirconium, Titanium, and Aluminum in addition to the high levels of Manganese and Silicon common to plain Carbon Steels of this group. The ability of this wire to perform well over oily, dirty, or rusty surfaces is one of its key features. ER70S-2 has a quick freezing weld pool with a somewhat tight molten range, which makes it an ideal choice for welding tubing, piping, and out-of-position applications. The deposits have high ductility, excellent impact values and tensile strength. ER70S-2 is often used on AISI 4130 tubing where lower tensile strengths are acceptable or where reinforcing gussets are used in the design. Tensile strength: 83,000 psi (specs call for 70,000 minimum). Elongation is 25%. This wire is often used with TIG and Plasma for critical applications. 36" Cut lengths are packaged in 1lb. tubes. Sold by the pound.



PART#	SIZE
-------	------

ER70S2-035	.035"
ER70S2-045	.045"
ER70S2-062	.062"

TIG FILLER ER80SD2 STEEL

80S-D2 is designed to give high strength weld on high sulfur bearing (free-machining) steels or medium carbon steels. This wire contains additional amounts of manganese and silicon which, when alloyed with 0.50% molybdenum, produces weld deposits which have high ductility, excellent impact values and tensile strengths of approximately 100,000 psi. 80S-D2 is commonly used on low carbon and low alloy steels such as AISI 4130 where tensile strengths provided by plain carbon steel wires are inadequate. A well balanced silicon content gives this wire superior arc stability, a low spatter level and a flat bead with excellent appearance. 80S-D2 produces X-ray quality, porosity free welds even over dirt, rust or mill scale. Applications Farm implements, automotive parts, pipes, light-gauge steels, low alloy steels such as AISI 4130 and high yield steels such as T-1. 36" Cut lengths are packaged in 1lb. tubes. Sold by the pound.



PART#	SIZE
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ER80S-D2-035	.035"
ER80S-D2-045	.045"
ER80S-D2-062	.062"

A970 VERNIER CONTROL	28	AN525 SCREWS	57	CABLE EYES - TURNBUCKLES	26,27
ABRASIVE TOOL	113,114	AN526 SCREWS	57	CABLE HOUSING	29
ACCELERATOR - RANTHANE	80	AN960 WASHERS	60	CABLE - NICOPRESS	24,25
ACETONE	69	ANCHOR NUTS	47-48	CABLE - NICOPRESS TOOL	25
ADAPTER - HOSE STRAIGHT	91,96	AVBLEND	85	CABLE SHACKLES	29
ADDITIVE - TCP	85	AVEX RIVETS	53	CABLE TIES	32
ADDITIVE - OIL & FUEL	84,85			CABLE TIE MOUNT	32
ADHESIVE - T-88	19	BACK RIVET TOOL	119	CAMLOC FASTENERS	65
ADHESIVE FILLER	20	BAFFLE FASTENERS	81	CAMLOC DRILL JIG	120
AERODUCT	81	BAFFLE SEAL	81	CAPNUTS	48
AERODUCT FLANGES	81	BAGGING FILM	22	CARBON FIBER	21
AEROKROIL	109	BAR - 4130	101	CASTLE NUTS	48
AEROPOXY	19	BARRELS - TURNBUCKLES	26,27	CASCOPHEN	90
AEROQUIP HOSE	87	BASSWOOD/BASSWOOD PLY	8	CAT - AERODUCT	81
AEROQUIP FITTINGS	87	BING PRIMER LINE	123	CECONITE FABRIC	76
AEROSHELL OIL	84	BIRCH/BASSWOOD PLY	8	CECONITE TAPES	76
AEROTHANE CATALYST	74	BIRCH/POPLAR PLY	9	CEET - AERODUCT	81
AEROTHANE COLORS	73	BOLT KIT	37	CHAFE SEAL	88
AIR FILTERS - BRACKETT	82	BOLTS	37-45	CHAMPION OIL FILTERS	85
AIRCRAFT ENGINE LOGBOOK	12	BOOKS	12	CHECK NUT	47
AIRCRAFT CABLE	24	BRAKE RIVET TOOL	120	CHERRY MAX RIVETS	51
AIRCRAFT LIGHTING	1-4	BREATHING BLEEDER N4	22	CIRCUIT BREAKERS	31
AIRCRAFT PLACARDS	5-7	BRUSHES	23	CLAMPS	64
AIRFOIL SELECTION	12	BUCKING BARS	117	CLEANERS	13
ABRASIVE TOOL	113,114	BUSHING - BRONZE	29	CLECOS	120
AIRLOC FASTENERS	64	BUSHING - SNAP NYLON		CLECO PLIERS	116
ALCLAD ALUMINUM SHEET	103	BUTYRATE COLORS	77	CLEVIS BOLTS	45
ALKALINE DETERGENT	69	BUTYRATE DOPE	75	CLEVIS PINS	61
ALUMINUM SHEET	103-105	BUTYRATE THINNER	75	CLIP NUTS	49
ALUMINUM TUBING	106-107			COMPASS FLUID	15
ALUMINUM PASTE	80	CABLE	24	COMPASS REPAIR KIT	15
AN BOLTS	37-45	CABLE PULLEYS	30	COMPASS SCREWDRIVER	123

COMPOSITE TOOLS	23	ELECTRICAL TERMINALS	33	FIRESLEEVE CLAMPS	87
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COTTON FLOCK	20	ENGINE LOGBOOK	12	FUEL SELECTOR	86
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CUPS - MIXING	23	EPOXY FILLERS	17,20	FUSES	36
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CUSHION CLAMPS	64	EPOXY PRIMER	71,76	GASCOLATOR	85
		EPOXY PRIMER CATALYST	71	GLASS CLEANER	13
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DRILL BITS	116	FABRIC - DACRON	69,70,76	HARDWARE	37-68
DRILL GUIDE	115	FABRICS & TAPES	69,70,76	HEAT SHRINK TUBING	33
DRILL STOPS	116	FASTENERS - SOUTHCO	67	HOSE - AEROQUIP	87
DZUS FASTENERS	66	FIBERGLASS	21	HOSE - COOLANT	87
		FIBERLOCK NUTS	49		
ELBOW - POLYETHYLENE	99	FILE - VIXEN		JAM NUTS	49
ELBOW - BRASS	96-97	FILES - PERMAGRIT	113		
ELBOW - NYLON	97-98	FILLISTER HEAD SCREWS	57	KEYCHAINS	123
ELBOW - STREET	95	FILTER - OIL	85	KLIXON CIRCUIT BREAKERS	36
ELECTRICAL	31-36	FINISHING WASHERS	59,60	KNIFE DISCONNECTS	34
ELECTRICAL CRIMPING TOOL	35	FIRESLEEVE	87		

LANDING LIGHTS	1-4	NYLON ROD	108	PLASTIC CLEANER	13
LAP JOINT JOGGLE TOOL	120	NYLON SHEET	108	PLASTIC TUBING	124
LEXAN	108			PLYWOOD	8-11
LIGHTS	1-4	O-RING KIT	62	POLY BRUSH	70
LOCKNUTS	49,50	O-RINGS	62,63	POLY SPRAY	70
LOCK WASHERS	61	OIL & COOLANT HOSE	87	POLY TAK	70
LOGBOOKS	12	OIL	84	POLYFIBER	67-74
LPS	109	OIL ANALYSIS KIT	85	POP RIVETS	50,51
		OIL DRAIN	83	PUSH PULL CONTROLS	28
MACHINE SCREWS	54-57	OIL FILTERS	85		
MAHOGANY/POPLAR PLYWOOD	10	OIL FILTER CUTTER	85	RAND-O-FILL	75
MANDREL FOR HOSE FITTINGS		OILITE BRONZE BUSHING	29	RAND-O-PLATE	76
MEK	69			RAND-O-PROOF	75
METAL PRIMER - EPOXY	100-102	PAINT	69-80	RANDOLPH	75-80
METAL CLEANER	69	PAINT- POLYTONE	72	RANTHANE	80
METALS	100-107	PAINT - AEROTHANE	73	RANTHANE ACCELERATOR	80
METAL - 4130 TUBING	100,101	PAINT - BUTYRATE	77	RANTHANE CATALYST	80
METAL - 4130 SHEET	102	PAINT - ENAMEL	78	RANTHANE REDUCER	80
METAL - ALUMINUM TUBING	106,107	PAINT - RANTHANE	79	REDUCER - EPOXY	71
METAL - ALUMINUM SHEET	103-105	PAN HEAD SCREWS	57	REDUCER - BUTYRATE	75
MILLED GLASS	20	PANEL JACKS	31	REINFORCEMENT TAPE	69,76
MIXING CUPS	23	PARAFLEX TUBING	124	REJEX	13
MIXING STICKS	23	PARTALL MOLD RELEASE	22	REJUVENATOR	75
MOUSEMILK	109	PEEL PLY	22	RELEASE FILM	22
MUSIC WIRE	29	PERFECT DETAIL	13	RESINS & HARDENERS	18,19
		PERMAGRIT	113,114	RETARDER - UNIVERSAL	75
N LETTERS	5	PHENOLIC SHEET	108	RIB LACE CORD	69
NAV LIGHTS	1,2	PILOT LOGBOOK	12	RING TERMINALS	34
NICOPRESS	24,25	PIN EYE - TURNBUCKLE	27	RIVET CUTTER	118,120
NITRILE GLOVES	23	PINS - CLEVIS	61,62	RIVET GUNS	117,118
NUTS	47-50	PITOT TUBE COVERS	109	RIVET KIT	118
NYLON FITTINGS	97-99	PLACARDS	5-7	RIVET TOOLS	117-120

RIVETS	50-54	T-88 EPOXY	19	URETHANE RETARDER	74
RIVNUTS	68	T-HANDLE CONTROLS	29		
ROD ENDS	30	TAIL STROBE	4	VACUUM BAGGING	22,23
		TANK MOUNT FUEL VALVE	86	VACUUM GAUGE	
SADDLES	123	TAPE - SEALANT	22	VALVE COVER SCREWS	58
SAFETY WIRE	46	TAPES - DACRON	70,76	VARNISH - EPOXY	71,80
SANDING	113,114	TERMINAL KITS	33,35	VARNISH - URETHANE	70,80
SCAT - AERODUCT	181	TERMINALS	33,35	VENTS	14
SCEET - AERODUCT	181	THIMBLES	24	VERNIER CONTROLS	28
SCREW KIT	59	THINNER - BUTYRATE	75		
SCREWS	54-59	THINNER - NITRATE	75	WASHERS	59-61
SEAL - CHAFE	88	TIES	32	WASHER KIT	59
SEAL - TORQUE	46	TINNED COPPER BRAID	32	WASHER WRENCH	120
SEAMER	118,121	TINNERMAN NUTS	49,50	WASHER - COPPER CRUSH	59
SEAT CUSHION FOAM	14	TIRES & TUBES	110-112	WASHER - COUNTERSUNK	60
SHEET - ALUMINUM	103-105	TOGGLE SWITCHES	31,36	WASHER - FINISHING	59
SHEET- STEEL	102	TOOL - RIVET REMOVAL	117	WASHER - NYLON	60
SHEET METAL SCREWS	58,59	TOOL - PERMAGRIT	113,114	WAX TIE CORD	33
SLEEVE - FITTINGS	94	TOOL - DEBURRING	122	WELDING ROD	125,126
SLEEVE - COPPER OVAL	24	TORQUE SEAL	46	WEST SYSTEM EPOXY	16-18
SLSEVE - TINNED OVAL	25	TRUSS HEAD SCREWS	54,59	WINDOW BUTT CONNECTORS	34
SNAP VENTS	14	TUBE BENDER	122	WING WALK	
SNIPS	121	TUBE CUTTER	122	WIRE - ELECTRICAL	35
SOLENOIDS	86	TUBING - STEEL	100,101	WIRE GRIPS	25
SOLID RIVETS	51,52	TUBING - ALUMINUM	106,107	WIRE TWISTERS	119
SOUNDPROOFING	88	TUBING SADDLES	123	WIRE - SAFETY	46
SOUTHCO STUDS	67	TURNBUCKLES	26,27		
SPEED DEBURRING TOOL	121	U-TYPE TINNERMAN NUTS	50		
SPLIT LOCK WASHERS	61	UNIVERSAL HEAD RIVETS	51,52		
STREAMLINE STRUTS		UNSHIELDED WIRE	35		
SUPERFIL EPOXY FILLER	20	URETHANE CATALYST	74		
SWITCH - TOGGLE	31,36	URETHANE THINNER	74		

GAGE DECIMALS

GAGE DECIMAL				
GAGE NO.	NON FERROUS	STEEL SHEET	STRIP & TUBING	BASIC WIRE
000000	.5800	-	-	.4615
00000	.5165	-	.500	.4305
0000	.4600	-	.454	.3938
000	.4096	-	.425	.3625
00	.3648	-	.380	.3310
0	.3249	-	.340	.3065
1	.2893	-	.300	.2830
2	.2576	-	.284	.2625
3	.2294	.2391	.259	.2437
4	.2043	.2242	.238	.2253
5	.1819	.2092	.220	.2070
6	.1620	.1943	.203	.1920
7	.1443	.1793	.180	.1770
8	.1284	.1644	.165	.1620
9	.1144	.1495	.148	.1483
10	.1019	.1345	.134	.1350
11	.0907	.1196	.120	.1205
12	.0808	.1046	.109	.1055
13	.0720	.0897	.095	.0915
14	.0641	.0747	.083	.0800
15	.0571	.0673	.072	.0720
16	.0508	.0598	.065	.0625
17	.0453	.0538	.058	.0540
18	.0403	.0478	.049	.0475
19	.0359	.0418	.042	.0410
20	.0320	.0359	.035	.0348
21	.0285	.0329	.032	.0317
22	.0253	.0299	.028	.0286
23	.0226	.0269	.025	.0258
24	.0201	.0239	.022	.0230
25	.0179	.0209	.020	.0204
26	.0159	.0179	.018	.0181
27	.0142	.0164	.016	.0173
28	.0126	.0149	.014	.0162
29	.0113	.0135	.013	.0150
30	.0100	.0120	.012	.0140
31	.0089	.0105	.010	.0132
32	.0080	.0097	.009	.0128
33	.0071	.0090	.008	.0118
34	.0063	.0082	.007	.0104
35	.0056	.0075	.005	.0095
36	.0050	.0067	.004	.0090
37	.0045	.0064	-	.0085
38	.0040	.0060	-	.0080

Non Ferrous: Aluminum sheet, Brass sheet, strip, wire, tube; Bronze, sheet, strip wire; Cooper strip, tube, wire;
 Steel sheet: Flat or coil; Hot or Cold rolled
 Tubing: Aluminum; Steel; Stainless Steel; Flat wire; Strip steel, stainless;
 Wire: Basic steel wire all finishes

SCREW THREADS AND TAP DRILL SIZES

UNC or NC Machine Screw Sizes				UNC or NC Fractional Sizes		
TAP SIZE	THDS P/IN	TAP DRILL	BODY DRILL	TAP SIZE	THDS. P/IN	TAP DRILL
1	64	53	48	1/4	20	7
2	56	50	44	5/16	18	F
3	48	47	39	3/8	16	5/16
4	40	43	33	7/16	14	U
5	40	38	1/8	1/2	13	27/43
6	32	36	28	9/16	12	31/64
8	32	29	19	5/8	11	17/32
10	24	25	11	3/4	10	21/32
12	24	61	7/32	7/8	9	49/64
				1	8	7/8

UNF or NF Machine Screw Sizes				UNF or NF Fractional Sizes		
TAP SIZE	THDS P/IN	TAP DRILL	BODY DRILL	TAP SIZE	THDS. P/IN	TAP DRILL
0	80	3/16	1/16	1/4	28	3
1	72	53	48	5/16	24	I
2	64	50	44	3/8	24	Q
3	56	45	39	7/16	20	25/64
4	48	42	33	1/2	20	29/64
5	44	37	1/8	9/16	18	33/64
6	40	33	28	5/8	18	37/64
8	36	29	19	3/4	16	11/16
10	32	21	11	7/8	14	13/16
12	28	14	7/32	1	12	59/64

DECIMAL EQUIVALENTS

Fraction of Inch	Decimal Inch	Decimal Millimeters	Fraction of Inch	Decimal Inch	Decimal Millimeters
1/64	.015625	0.39688	33/64	.515625	13.09690
1/32	.03125	0.79376	17/32	.53125	13.49378
3/64	.046875	1.19063	35/64	.546875	13.89065
1/16	.0625	1.58750	9/16	.5625	14.28753
5/64	.078125	1.98438	37/64	.578125	14.68440
3/32	.09375	2.38125	19/32	.59375	15.08128
7/64	.109375	2.77813	39/64	.609375	15.47816
1/8	.125	3.17501	5/8	.625	15.87503
9/64	.140625	3.57188	41/64	.640625	16.27191
5/32	.15625	3.96876	21/32	.65625	16.66878
11/64	.171875	4.36563	43/64	.671875	17.06566
3/16	.1875	4.76251	11/16	.6875	17.46253
13/64	.203125	5.15939	45/64	.703125	17.85941
7/32	.21875	5.55626	23/32	.71875	18.25629
15/64	.234375	5.95314	47/64	.734375	18.65316
1/4	.25	6.35001	3/4	.75	19.05004
17/64	.265625	6.74689	49/64	.765625	19.44691
9/32	.28125	7.14376	25/32	.78125	19.84379
19/64	.296875	7.54064	51/64	.796875	20.24067
5/16	.3125	7.93752	13/16	.8125	20.63754
21/64	.328125	8.33439	53/64	.828125	21.03442
11/32	.34375	8.73127	27/32	.84375	21.43129
13/64	.359375	9.12814	55/64	.859375	21.82817
3/8	.375	9.52502	7/8	.875	22.22504
25/64	.390625	9.92189	57/64	.890625	22.62192
13/32	.40625	10.31877	29/32	.90625	23.01880
27/64	.421875	10.71565	59/64	.921875	23.41567
7/16	.4375	11.11252	15/16	.9375	23.81255
29/64	.453125	11.50940	61/64	.953125	24.20942
15/32	.46875	11.90627	31/32	.96875	24.60630
31/64	.484375	12.30315	63/64	.984375	25.00318
1/2	.5	12.70003	1	1	25.40005

ENGINE COLOR CODE IDENTIFIERS

Location - between push rods on fins, or around cylinder base

Gray or unpaintedStandard steel cylinder barrels
 OrangeChrome plated cylinder barrels
 BleuNitride hardened cylinder barrels
 GreenSteel cylinder 0.010 oversize
 YellowSteel cylinder 0.020 oversize

SPARK PLUG COLOR IDENTIFIER

Location - Fins between spark plug hole and rocker box.

Gray or unpaintedShort reach plug
 YellowLong reach plug

COPPER ELECTRIC WIRE CURRENT CARRYING CAPACITY

Wire Size Spec	Single wire in free air-max. amperers	Wire in conduit or bundled-max. amperers	Max. Resistance ohms 1,000 ft
MIL-W-5086			
AN-20	11	7.5	10.25
AN-18	16	10	6.44
AN-16	22	13	4.76
AN-14	32	17	2.99
AN10	55	33	1.20
AN-8	73	46	.70
AN-6	101	60	.436
AN-4	135	80	.274
AN-2	181	100	.179
AN-1	211	125	.146
AN-0	245	150	.114
AN-00	283	175	.090
AN-000	328	200	.072

WIRE/ CIRCUIT PROTECTOR CHART- AN GAUGE COPPER

Wire Gauge	Amp C/B	Amp Fuse	Wire Gauge	Amp C/B	Amp Fuse
22	5	5	10	35 (40)	30
20	7.5	5	8	50	50
18	10	10	6	80	70
16	15	10	4	100	70
14	20	15	2	125	100
12	25 (30)	20	1		150

4130 AIRCRAFT TUBING

4130 is a through-hardened chrome-molybdenum alloy tubing used extensively in the aircraft, and anywhere high strength structural tubing is needed. It is not suitable for welding and etching and has a lustrous, clear interior and exterior surfaces. 4130 is produced by the cold drawn seamless process from electrofurnace processed steel.

Application:

The weldability of 4130 is excellent, and therefore it finds popular utilization in aircraft type construction where welding is a requirement. Specification: MIL-T-6736, AMS-6360

Remarks: Magnetic; Coefficient of Thermal Expansion: 6.5 x 10⁻⁶ in/in/°F; Limits of Mill-T-6736; Is ferromagnetic with a KSI yield 5000⁰₀ MECHANICAL PROPERTIES

MECHANICAL PROPERTIES CONDITION "N" NORMALIZED				
	Minimum Tensile Strength (psi)	Minimum Yield Strength (psi)	Elongation % in 2"	
			Tube	Strip
Up to .025 Inc.	95,000	75,000	10	5
Over .025 to .188 Inc.	80,000	70,000	12	7
Over .188	80,000	70,000	15	10
Condition HT-125	125,000	100,000	12	7

OUTSIDE DIAMETER TOLERANCES			
Outside Diameter	Condition (A) & (N)	Quenched & Tempered	Wall Tolerance
3/16" or smaller T-22 ed	+/- .005	+/- .010	+/- .015
1/2 or to under 1-1/2 ed	+/- .010	+/- .015	+/- .015
1-1/2 ed to 3-1/2 ed Inc.	+/- .010	+/- .020	+/- .020

MECHANICAL PROPERTIES CONDITION "T" HARDENED & TEMPERED				
	Tensile Strength psi	Yield Strength psi	Elongation in 2"	Reduction of AREA
Condition F	125,000 min	100,000 min	12% min.	65% min.

ELEMENT ANALYSIS							
Carbon	Manganese	Phosphorus	Sulphur	Silicon	Chromium	Nickel	Molybdenum
28/33	40/60	.035 max.	.035 max.	15/35	80/110	.25 max.	15/25

Heat Treatment
 Normalize : 1600⁰/1050⁰F
 Austenitize : 1500⁰/1650⁰F
 Quench: Oil
 Temper : 1000⁰/1200⁰F

Color Marking
 Normalized temp - entire painted pink
 Heat Treated bars - ends painted white
 Unannealed tubes - ends painted pink

MACHINABILITY: As reported by MIL-G-07066, minimum endurance-ratio based on values for grade with Rockwell "C" 35 at 5/16" and Rockwell "C" 38 at 1/8".

AIRCRAFT WASHERS

The standard washer is 1/16 inch thick and is available in two types for each of the most commonly used bolt diameters. The smaller diameter washer is known as the AN960, and the larger diameter washer, the AN970. The larger washer is often called a wood washer because it is used most frequently against wood surfaces to provide a larger bearing surface.

Plain washers are used in bolt installations to present a smooth level bearing surface for either the bolt head or nut - sometimes both. Use a washer under the part to be torqued, be it the nut or bolt head or under both if you deem it necessary. Any place a bolt is not perpendicular to the surface may require the use of a tapered shim or specially made tapered washer.

Since bolt lengths are made in 1/8 inch increments, washers may sometimes be necessary to obtain the correct grip length for a bolt that is a little too long. A maximum of two standard 1/16 inch thick washers are sufficient to correct for a slightly long bolt. If not, use the next size shorter bolt.

Steel lock washers may be used as a locking feature for plain nuts but do not place a steel lock washer against an aluminum alloy nut or aluminum fitting.

NUTS

If you are a newcomer to the realm of homebuilt aircraft and aircraft maintenance, you may be surprised to learn that aircraft bolts do not come with nuts. Each nut and bolt is bought separately. Primarily, I suppose, because of the very large variety of nuts which are available for specific aircraft requirements.

Aircraft nuts have no identifying markings or lettering on them, but they are made of the same material as the bolts.

All nuts can be started with fingers. If a nut gives you trouble in this regard, better recheck the threads - they may be coarse instead of fine. Aircraft nuts and bolts do sometimes have coarse threads although they are rarely used by homebuilders.

SHEAR NUT

Shear nuts, either the self-locking or castle types, are easily recognized. They are those thin looking nuts, and they are used most often with clevis bolts. Never use shear nuts where the installation is subjected to tension loading.

SELF-LOCKING NUTS & NUT SAFETY FEATURES

All nuts/bolt installations in your aircraft should have some safety features to prevent their loosening in service. Methods employed include the self-locking nuts, cotter-key combinations, jam nuts, lock washers, pal-nuts, and still found in primitive areas, peening of the bolt end with a hammer.

Self-locking nuts are, by far, the most commonly used type of nuts as they require no external help for safetying. The nuts feature an integral safetying provision as part of their construction.

Self-locking nuts are used because they provide tight shake-proof installations which can withstand continued severe vibration. They must not, however, be used in any joint or connection where either the nut or bolt is subject to rotation. Self-locking nuts may be used with any anti-friction bearings (rod ends) or control pulleys but only if the inner race of the bearing is clamped to a fitting (or part of the structure) by a bolt and nut.

The two types of self-locking nuts (all-metal type and fiberlock type) are interchangeable except that the fiberlocking type may not be used in locations where the temperatures exceed 250° F. Metal self-locking nuts are used in places where temperatures exceed 250° F and may run as high as 400° F.

Elastic stop nuts may be reused many times, certainly until the fiber has lost its locking friction or has become brittle with age. If you can turn the nut up all the way with your fingers, replace it.

CASTLE NUTS

These nuts have no self-locking provision so they must be secured to the bolt mechanically with a cotter pin or safety wire or some sort of clip, otherwise they might loosen under vibration. The castle nut is slotted and requires a bolt with a drilled hole to accept a cotter pin. Regular castle nuts are rugged and capable of withstanding high tension loads.

Be careful when using a castle nut on a clevis bolt in the control system where rudder pedals or other linkage might interfere with other parts. Cotter pins have a way of snagging.

TORQUING

Except as a last resort, do not torque a bolt by turning it.

Tighten or torque castellated nuts as you would any other standard nut. If the slots and cotter pin hole in the bolt will not line up for safetying, tighten the nut to the next slot even though the recommended torque values will be exceeded. This over torquing leeway applies only to castle nuts and not others.

Cotter pins when used should fit snugly but not so tight you have to hammer them into the bolt hole. Bend the ends so that one end is over the end of the bolt reaching to its center or slightly beyond. The other leg is bent snugly against the nut.

Coarse threads require slightly less torque and so do shear nuts. Actually, about 1/2 the amount of torque is sufficient for them.

And, finally, even if you don't use a torque wrench - no self-respecting homebuilder will ever allow himself to be caught using a pair of pliers to tighten a nut.

BOLTING PRACTICES

One of the most common methods of securely joining two objects together is the use of a bolt-nut combination. This provides a unit which has a predictable strength, unless the bolt has been improperly installed. If this happens, strength is substantially reduced and failure may result.

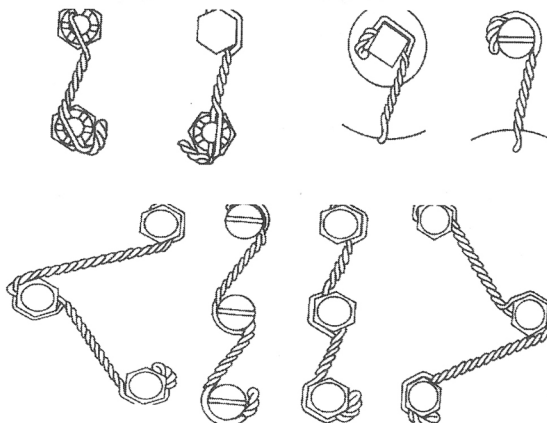
Aircraft bolts are about .001 to .003 inch smaller than their nominal diameter, permitting easy installation in a properly drilled hole. The hole should be drilled such that the head of the bolt will lie solidly against the surface of the metal, as seen in the figure. Burrs around the edge of the hole should be removed before the bolt is inserted. Bolts are generally used in some shear application, therefore the smooth shank should extend entirely through the hole. No threads should be in contact with the bearing surface, as seen in the figure.

Most applications using bolts require the use of a washer. The proper washer for the job must be carefully chosen. The bolt installation is complete when the unit has been torqued to the specification set down by the manufacturer.

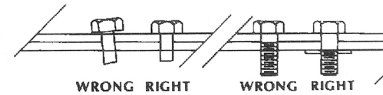
SAFETYING

Apply to all types of bolts, fillister head screws, square head plugs. Directions of twist from the second to the third unit is counterclockwise to keep the loop in position against the head of the bolt. The wire entering the hole in the third unit will be the lower wire and by making a counterclockwise twist after it leaves the hole, the loop will be secured in place around the head of that bolt.

Methods for wiring various standard items. Note: The wire may be wrapped over the unit rather than around it when wiring castellated nuts or other items where there is a clearance problem.



BASIC "AN" PART NO.	THREAD	T	RATED STRENGTH (POUNDS)					
			ULTIMATE TENSIL AT ROOT DIA		YIELD TENSILE AT ROOT DIA		SINGLE SHEAR AT FULL DIA	
			STEEL	ALUM ALLOY	STEEL	ALUM ALLOY	STEEL	ALUM
AN3	10-32	NF-3A	2,210	1,100	1,690	710	2,125	990
AN4	1/4-28	UNF-3A	4,080	2,030	3,130	1,310	3,680	1,715
AN5	5/16-24	UNF-3A	6,500	3,220	4,980	2,080	5,750	2,685
AN6	3/8-24	UNF-3A	10,100	5,020	7,740	3,240	8,280	3,870
AN7	7/16-20	UNF-3A	13,600	6,750	10,430	4,350	11,250	5,250
AN8	1/2-20	UNF-3A	18,500	9,180	14,190	5,920	14,700	6,850
AN9	9/16-18	UNF-3A	23,600	11,700	18,100	7,550	18,700	8,700
AN10	5/8-18	UNF-3A	30,100	14,900	23,080	9,610	23,000	10,750
AN12	3/4-16	UNF-3A	44,000	21,800	33,730	14,100	33,150	15,500
AN14	7/8-14	UNF-3A	60,000	29,800	46,000	19,200	45,050	21,050
AN16	1-14	NF-3A	80,700	40,000	61,870	25,800	50,980	21,500
AN17	1-12	UNF-3A	80,700	40,000	61,870	25,800	58,900	27,500
AN18	1-1/8-12	UNF-3A	101,800	50,500	78,050	32,600	73,750	34,500
AN20	1-1/4-12	UNF-3A	130,200	64,400	99,820	41,500	91,050	42,500



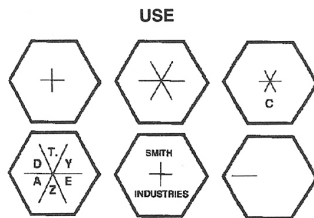
AN 3 - 14 A

Air-Force/
Navy Standard

Diameter in
1/16th of an
inch

A: Undrilled shank
No letter: Drilled shank

First number: Length in whole inches
Second or only number: additional 1/8ths inches



(Corrosion Resistant)

Aluminum bolt:
Half as strong as steel
Use only if specified

Non-certified bolt:
NOT for aircraft use.

ALL "AN" BOLTS HAVE:
GRIP TOLERANCE OF +/- 1/16
NOMINAL LENGTH TOLERANCE OF + 1/32 -1/64

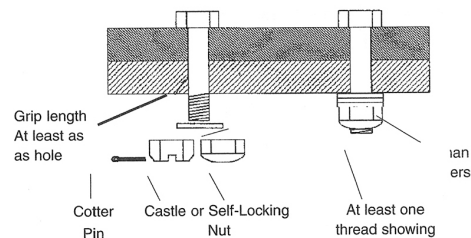
MATCHING BOLTS - NUTS - WASHERS

SIZE THREAD BOLT	ELASTIC STOP NUT		METAL Nut	CASTLE NUTS		COTTER Pin	STEEL FLAT WASHERS		
	Thin	Regular		Regular	Shear		Regular	Thin	Wide
1032 AN3	MS20364-1032	MS20365-1032	AN363-1032	AN310-3	AN320-3	MS24665-132	AN960-10	AN960-10L	AN970-3
1/4-28 AN4	MS20364-428	MS20365-428	AN363-428	AN310-4	AN320-4	MS24665-132	AN960-416	AN960-416L	AN970-4
5/16-24 AN5	MS20364-524	MS20365-524	AN363-524	AN310-5	AN320-5	MS24665-132	AN960-516	AN960-516L	AN970-5
3/8-24 AN6	MS20364-624	MS20365-624	AN363-624	AN310-6	AN320-6	MS24665-283	AN960-616	AN960-616L	AN970-6
7/16-20 AN7	MS20364-720	MS20365-720	AN363-720	AN310-7	AN320-7	MS24665-283	AN960-716	AN960-716L	AN970-7
1/2-20 AN8	MS20364-820	MS20365-820	AN363-820	AN310-8	AN320-8	MS24665-283	AN960-816	AN960-816L	AN970-8

TORQUE VALUES OIL-FREE CADMIUM-PLATED THREADS		
BOLT SIZE	NUTS	
	Tension type MS20365 AN310	Shear-type MS20364 AN320
Bolt PSI	40,000 PSI	24,000 PSI
8-32	12-15	7-9
10-32	20-25	12-15
1/4-28	50-70	30-40
5/16-24	100-140	60-85
3/8-24	160-190	95-110
7/16-20	450-500	270-300
1/2-20	480-690	290-410

Torque values in inch-pounds for tightening nuts.
To obtain values in foot-pounds,
divide inch-pounds by 12.

Bolt heads **UP & FORWARD** when possible.
NO elastic stop nuts in engine compartment.



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