

# TEST EQUIPMENT

## EASTERN ELECTRONICS TEST EQUIPMENT

### MAGNETO TIMING LIGHT - MODEL E50



Designed specifically for internal timing of aircraft magnetos and for synchronizing magnetos to aircraft engines. Eliminates all guesswork and provides a greater safety factor by creating perfect timing quickly and easily. Simply attach three clips to the magnetos and adjust until both bright lights flash in sync and the buzzer changes pitch. Fail-safe circuitry, variable pitch buzzer. Heavy-duty 3"x 5"x 2-1/8" unbreakable case. Wt. 1.5 lbs. Complete with 18 gauge lead wires 36" long and instructions. P/N 12-01013.....

U.S. Industrial Equivalent.....P/N TP105.....

### AIRCRAFT TIMING INDICATOR MODEL E25



This all-aluminum unit improves and speeds up the timing of magnetos to the engine. Easily attached to propeller spinner, it is accurate to within 1/2 degree. Has easy to read dial and comes with top dead center locator and mounting bands. P/N 12-01014.....

Replacement Piston Stop P/N 12-18100.....

U.S. Industrial Equivalent P/N TP102.....

### MAGNETO TIMING LIGHT



These devices measure the change in inductance in the magneto coil when the points open and close. Simply shorting the clip leads together will not indicate a point closing, therefore eliminating any false reading caused by loss of contact to the magneto grounding terminal. To use, simply remove one plug from each cylinder. Connect black clip lead to engine ground. Connect red and green leads to right and left magneto terminals. Turn propeller slowly. When the points open the LEDs will turn off and the audio "tweeter" will sound. The magneto connected to the red lead will sound a rapid beat and the magneto connected to the green lead will sound a slower beat. When both sets of points are open, a third and continuous sound will be emitted. Adjust magneto timing accordingly. 100% solid state, compact 3/4" x 3" x 5" size, long battery life. Color coordinated leads are 4 ft. long. Comes in strong anodized aluminum case.

Dual Magneto Synchronizer w/Tweeter..... P/N 12-16901.....

Dual Magneto Synchronizer w/o Tweeter..... P/N 12-16902.....

Single Magneto Timing Light w/Tweeter..... P/N 12-16903.....

### TRACERLINE AVIATION ULTRASONIC LEAK DETECTOR



**Master Kit Includes:** • Marksman Receiver • UltraSonic Emitter • Headphones • 12 inch Air Probe • Contact Probe • Carrying Case

**Features:** • Converts & Amplifies Ultrasonic Sound Into Audible "Natural" Sound for Accurate Diagnosis. Finds Problems Before They Result in Major Breakdowns • Frequency Response: 36,000 - 44,000 Hz • Detects Air Brake, Compressed Air, Vacuum, EVAP System and Other Pressurized

Leaks Quickly and Effortlessly • Pinpoints Gear and Bearing Wear in Wheel Hubs, Transmissions, Transfer Cases, Differentials and Electric Motors. Check for Electrical Discharge Associated with Insulation Breakdown, Carbon Tracking and Arcing • Finds Air and Water Leaks Passed Faulty Seals, Gaskets and Weather Stripping in Passenger Cabs, Trailers and other Non-Pressurized Enclosures Using Ultrasonic Pulses 10-Bar LED Intensity Indicator Helps Detect Sounds Well Beyond the Range of the Human Ear • Automatic Gain Control that Instantly Compensates for Changes in Signal Strength so you can focus on the task

**Specifications:** • Shipping Weight: 3.4 lbs (1.7kg) • Housing: Chemical Resistant Nylon with Protective Boot • Battery Life: Approx 20 hours. • Power Requirement: One Standard 9-Volt Alkaline Battery Each for. • Receiver & Emitter • Power Consumption: 27mA • Frequency Response: 36,000 - 44,000Hz • Circuitry: Solid State • Headphones: Full-Sized, noise attenuating P/N 12-01745.....

### HIGH VOLTAGE CABLE TESTER MODEL E5



Gives a fast, accurate test of high voltage aircraft ignition cables. Simply connect 3 wires, push test button and test is completed. The E5 will instantly indicate in its test window both good and defective cables - no waiting for indication to appear. Fail-safe circuitry. Heavy-duty lead wires. Compact 3" x 5" x 2-5/8" case. Wt. 1-1/2 lbs. P/N 12-01016.....

U.S. Industrial equiv .....P/N TP103.....

**DIFFERENTIAL CYLINDER PRESSURE TESTER**

### DIFFERENTIAL CYLINDER PRESSURE MODEL E2A



The Model E2A tester quickly locates worn or cracked rings, a defective intake or exhaust valve, scored or cracked cylinders, leaky head gaskets, worn or stripped spark plug bushings, etc. Eliminates guesswork by allowing you to locate the exact location and cause of your engine's loss of efficiency. The Model E-2M differential cylinder pressure tester, with a SLOW FILL safety valve and built in Master Orifice, has been field tester for 2 years by Teledyne Continental Motors, and has been approved for use on Teledyne Continental Engines by their Engineering and Field Services Group. The new valving adds additional safety; speeds up the test process. Rugged construction features heavy-duty gauges, extra long high-pressure hose, precision regulator, all connections quick-disconnect, 18mm plug adapter. Complete instructions with each unit. "M" models have built-in master orifice.

E2A - for cylinders < 5" bore.....P/N 12-01012.....

E2A-1000 - for cyl. > 5" bore.....P/N 12-01017.....

E2M - for cylinders < 5" bore.....P/N 12-01015.....

E2M-1000 - for cyl. > 5" bore.....P/N 12-00692.....

E2A-12mm (Rotax) for cyl. < 5" bore.....P/N 12-00693.....

12 mm Adapter.....P/N 12-01018.....

10/14 mm Adapter.....P/N 12-18201.....

18 mm Adapter.....P/N 12-18202.....

U.S. Industrial Equivalent.....P/N TP104.....

14MM Adapter.....P/N TP171.....

18MM Adapter.....P/N TP104-9A.....

### COMPRESSION TESTER EXTENSION



This tool makes compression testing easy. Wrench free way to test that allows for exhaust system and baffling clearance. Tester is manufactured with quality-welded construction and offers a spark plug thread with O-Ring seal. It has a standard air fitting. P/N 12-01060.....

### AUDIOTECH PROBE

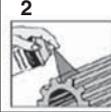
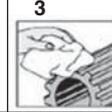
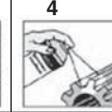
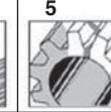


The Model AT201 diagnostic Listening Tool is a versatile, time-saving tool which is ideal for use in any application where there is movement of mechanical parts, air, gas, or fluid. Ideal for use on commercial, general aviation, or homebuilt aircraft and helicopters for application such as air leak and vacuum detection, bearing wear, worn or chipped gears, engines, turbines, and compressors, hydraulics, fuel injectors, flow valves, instrument failure, and more. Audiotech Probe can quickly and accurately pinpoint the trouble spot so that the problem can be fixed quickly the first time. Diameter of small mic at end of probe is 3mm. AAA battery included. Perfect for homebuilders, A & P's, A & E's, and A & I's. P/N 12-21420.....

TO

# PENETRANT INSPECTION KITS-MALLETS-HAMMERS

## MAGNAFLUX NDT (NON-DESTRUCTIVE TESTING) KIT

				
<b>1</b> Pre-clean inspection area. Spray on Cleaner, wipe off with cloth.	<b>2</b> Apply penetrant. Allow short penetration period.	<b>3</b> Wipe to remove Penetrant from surface. Use Cleaner, moistened towel if surface is rough.	<b>4</b> Shake can and spray on a thin film of Developer.	<b>5</b> Inspect. Defects will show as bright red lines in white Developer background.

A quick, easy way to make shop and in-field inspections of landing gear, airframe and components. Highly sensitive Spotcheck dye penetrants which give clear, bright red indications. Locates very fine cracks on the surface of ferrous and non-ferrous components, equipment and structures. Reveals cracks on materials with surface temperatures as high as 350°F. Perfect for testing welds before thorough cooling. Convenient spray cans make application easy and contain no fluorocarbon propellants. Non-flammable. Materials meet applicable specifications for dye penetrant inspections (ASME, ASTM and MIL specs). Considered flammable and hazardous by UPS.



**4-CAN SPOT CHECK® TEST KIT** - The lowest priced way to check for cracks, leaks and other defects on any metal parts. Kit includes 1 spray can of developer, 2 cans of cleaner & 1 can of dye penetrant in cardboard case.

Magnaflux 4-can kit ..... P/N 09-00391 .....  
 Developer ..... P/N SKD-S2 .....  
 Replacement Materials: Penetrant ..... P/N SKL-SP .....  
 Cleaner/Remover (12oz. Aerosols) ..... P/N SKC-S .....

**SK-3 KIT** - The SK-3 kit is larger, comes in a lightweight high-impact plastic carrying case containing 2 cans of penetrant SKL-SP, 4 cans of cleaner/remover SKC-NF, 2 cans of developer SKD-NF, brush, cloth and instructions. P/N SK-S.....

**SKC-S CLEANER** - This clear, fast-drying solvent can be used for pre-cleaning, post-cleaning and penetrant removal. P/N SKC-S.....

**SKL-SP PENETRANT** - Because of its vivid red color, this solvent removable dye penetrant provides excellent color contrast performance to locate surface cracks in virtually any metal or non-porous ceramic material. P/N SKL-SP .....

**SKD-S2 DEVELOPER** - Made especially for use with SKL-SP penetrant, this developer contains suspended white particles that provide an ideal background for red Spotcheck penetrant indications. P/N SKD-S2 .....

## MET-L-CHEK PENETRANT INSPECTION KITS



Met-L-Chek kits provide a completely portable, job-proven method used throughout the industry to locate cracks, flaws and other defects. These economical & effective kits provide everything needed to make inspections in the shop or field. The penetrant materials are packaged in easy-to-use aerosol spray cans and a can of cleaner included for cleaning parts before inspection. The inspection procedure is easy to learn, accurate and inexpensive. Met-L-Chek can be used on ferrous and non-ferrous materials to find surface defects and 'thru leaks'. Supplied in a rugged metal case with complete instructions. The 4-Can Kit has one aerosol spray of cleaner, penetrant, developer and remover. The 8-Can Kit has 2 cans of each material. Individual replacement cans available.

4-Can Kit.....P/N 09-38304 .....  
 8-Can Kit.....P/N 09-38308 .....

## GARLAND NON-MARRING MALLETS AND HAMMERS



Since 1866, Garland Manufacturing has been supplying America with top-quality products made from the finest water buffalo rawhide. Today, they're the leader in the manufacture of soft-faced mallets and hammers of unsurpassed quality.

All Garland products are manufactured in the U.S.A. to ISO 9002 international quality standards. They combine superior craftsmanship with the best materials and then field-test their products extensively on a range of surface finishes to meet the requirements of the industries in which they're used. Industries ranging from foundries and electrical manufacturing to jewelry and woodworking. Their mallets and soft-faced hammers are preferred by both craftsmen and production workers.

## RAWHIDE AND WEIGHTED RAWHIDE MALLETS

Garland's all-rawhide mallets are made of tough, long-wearing, water buffalo rawhide. They're ideal for use on broad-faced striking surfaces in a broad range of applications.

RAWHIDE MALLETS					
Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
0	1"	2"	2	12-00749	.
2	1-1/2"	3"	6	12-00750	.
4	2"	3-1/2"	11	12-00751	.
6	2-3/4"	4-3/4"	24	12-00752	.
WEIGHTED RAWHIDE MALLETS					
Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
7	1-1/4"	2-1/2"	8	12-00753	.
10	2"	3-1/2"	20	12-00754	.

## RUBBER MALLETS

Garland's rubber mallets are designed for general-purpose applications. All sizes deliver solid, mar-free blows.

Size	Face Dia. (Inches)	Head Length (Inches)	Weight (oz.)	Part No.	Price
1	2-1/4"	3"	17	12-00755	.
2	2-1/4"	3-7/8"	19	12-00756	.
3	2-1/2"	4-1/2"	32	12-00757	.

## SPLIT-HEAD HAMMER



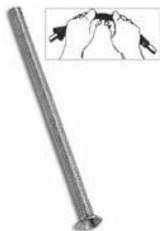
The split-head hammer does the work of six different hammers because the face can be easily changed. Available in two sizes.

• Many materials & surfaces • Foundry • Die moving or positioning • Assembly • Electric Motor Repair • Propeller Repair

Size	Face Dia.	Head Length	Weight	Part No.	Price
3	1-3/4"	4-3/4"	2.5 lbs	12-00965	.
5	2-3/4"	5-3/4"	5.25 lbs	12-00966	.

TO

# TUBE BENDERS – CUTTERS – FLARING TOOLS



## SPRING TUBE BENDERS

Economical tools for hand-bending of soft aluminum and copper tubing to any shape without collapsing walls. Special spring steel, nickel finished. End belled for quick tube removal. Set of 6 for 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.  
P/N 12-00823 .....

## LEVER TYPE BENDERS

Each tool bends one size. Open side type slips over tube at any point. Makes smooth short-radius bends up to 180° with minimum effort. No marking, scraping or flattening of tubing. Calibrated to show angle of bend. Wide hook grips tube securely. Suitable for bending annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

Tubing O. D.	Bender Model No.	Part No.	Bending Radius	Price
1/8"	364-FH-02	12-20002	3/8"	.
3/16"	364-FH-03	12-20003	7/16"	.
1/4"	364-FHA-04	12-20004	9/16"	.
5/16"	364-FHA-05	12-20005	1 1/16"	.
3/8"	364-FHA-06	12-20006	1 5/16"	.
1/2"	364-FHA-08	12-20008	1-1/2"	.
5/8"	364-FHA-10	12-20010	2-1/4"	.
3/4"	364-FHA-12	12-20012	3"	.

## WIDE RANGE LEVER TYPE BENDERS

Tool quickly adapts to all sizes in its range by changing forming wheel and block. Long handles re-position during bend for best leverage. Calibrations show precise bend angle. Benders for 3/8" through 3/4" O.D. tubes are as illustrated. Benders for 1/4" and 5/16" O.D. tube in #350-FHA kit are one piece type. Kits furnished in steel tool box.  
Model 350-FHA Kit- For 1/4", 5/16", 3/8", 1/2", 5/8" & 3/4" Tube ..... P/N 12-20100 .....

Model 360-FHA Kit- For 3/8", 1/2", 5/8" & 3/4" Tube. P/N 12-20200 .....

## TRIPLE HEADER TUBE BENDER



For bending annealed copper, aluminum, brass, steel and stainless steel tubing. Multi-tube design does the work of three conventional lever type benders. Calibrated markings for making accurate left-hand, right-hand and offset bends. (for 1/8", 3/16", 1/4" O.D.)  
P/N 12-01577 .....

## IMP® TRIPLE HEADER TUBE BENDER



Calibrated markings for making accurate left-handed, right-handed and offset bends. 90° start requires less effort-making bending fast and easy. For 1/4", 5/16", & 3/8" (6 & 8 mm) O.D. tubing. 15/16" radius to center of tube. (for 1/4", 5/16", 3/8" OD)  
P/N 12-01578 .....

## SOFT PIPE/TUBING CUTTER



This economical tool will cut soft pipe and tubing up to 1-1/4" outside diameter. The blade is teflon-coated and reverses for double the useful life of the blades. .... P/N 12-20020 ..... ea.  
Replacement Blades..... P/N 12-20025 ..... ea.

## EZ-BEADER TUBING BEADERS



Designed to replace the original Parker beading tools. Compact design. Capable of tubing wall thickness from .035 to .065 thick

Size	Description	Part No.	Price
1/8"	EZ-BEADER TP885A	12-00354	.
1/2"	EZ-BEADER TP885B	12-00355	.
5/8"	EZ-BEADER TP885C	12-00356	.
3/4"	EZ-BEADER TP885D	12-00357	.
1"	EZ-BEADER TP885E	12-00358	.
1-1/4"	EZ-BEADER TP885G	12-00359	.
1-1/2"	EZ-BEADER TP885H	12-00360	.
1-3/4"	EZ-BEADER TP885I	12-00361	.
2"	EZ-BEADER TP885J	12-00362	.
Set of all 9	EZ-BEADER Tubing Beader	12-00363	.



## HL-DUTY TUBE CUTTER

For 1/8" to 1" O.D. metal tubing. Makes clean, right-angle cuts with no burrs or chips to clog tubing. Roller type with flare cut-off groove, fold-away reamer and spare cutting wheel. Wt. 6-1/2 oz.  
Hi-Duty Tube Cutter P/N 12-00382.....  
Replacement Cutter Wheel P/N 75015 .....

Replacement Reamer Blade P/N 79318-01 .....



## "IMP" TUBE CUTTER

Designed for use in tight quarters where other cutters won't fit. For 1/8" to 5/8" O.D. tubing. Requires only 13/16" swing radius. Perfect for instrument panels, control cabinets, machine tools, etc. Size: 111/16" x 1-5/16" x 7/8". Wt. 2-1/2 oz.  
P/N 12-01277 .....

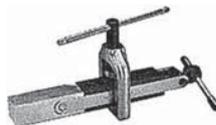


## JUNIOR TUBE CUTTER

Exceptionally handy in close quarters - only 3-1/2" overall length. Makes clean, right-angle cuts without flattening tube. Cuts 1/8" to 3/4" O.D. tubing. Enclosed feed mechanism. Wt. 5 oz.  
Junior Cutter P/N 12-01576.....  
Replacement Cutter Wheel P/N 32633 .....

## WEATHERHEAD

### T-1295 Heavy Duty Segmented Flaring Tool (37°)



Tool Flares: 1/8", 3/16", 1/4", 5/16", 3/8", and 1/2", O.D. tubing. Forms 37° flares in annealed stainless steel (MIL-T-6845 or AMS-5566), cold drawn stainless steel, and annealed copper, brass, steel or aluminum. Bar has vice extension. Wt.: 3lbs. P/N 12-01166 .....

## HI-DUTY FLARING TOOL 37°



Hard chrome-finished cone makes exceptionally smooth, high strength flares with a radius at base of flare instead of the sharp angle formed by ordinary tools. Slip-on yoke permits use in tight quarters. For tubing sizes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. Wt. 1 lb. 11 oz. Not for use on Stainless Steel Tubing.  
P/N 12-01581 .....

## ROL-AIR FLARING TOOL 37°



Faceted, hard chrome finished cone rolls out perfect flares above die block, then automatically burinishes flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. Flares and burinishes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing. Wt. 1-1/2 lbs. Works on some Stainless Steel Tubing but not warranted for Stainless.  
P/N 12-01582 .....

## ROLO-FLAIR FLARING TOOL 37°



Operates on same principle as Imperial #507-FA but flares 1/8" (primer line) and 3/4" tubing as well. Size: 4"W x 4"D x 8"H. Wt. 2-1/2 lbs. Excellent tool for bench - not for close-quarter work. Not for use on Stainless Steel Tubing.  
P/N 12-01575 .....



## DELUXE 37° FLARING TOOL

Forms 37° flare to AN standards in steel, stainless steel (including MIL-T 6845), titanium, an other metal tubing. Three rollers in flaring cone roll out 37° flare above die block. Extension on yoke for clamping in vise. Furnished in plastic kit. Wt. 2-1/2 lb.  
P/N 12-01579 .....

TO

# FLARING TOOLS - BENDERS - RIVET SQUEEZERS



## 37° FLARING BLOCK FOR 1/8" TUBING

This tool is designed to flare 1/8" tubing for primer lines. Leaves no ridges or marks on tubing, complying with aircraft requirements. Furnished with 37° flaring punch. The slip-on yokes of most flaring tools also fit this block.

P/N 17010 .....



## 37° DOUBLE LAP FLARING TOOL

This U.S. made 37° Double Lap Flaring Tool makes flares to AN standards in soft copper and aluminum tubing for 3/16" 1/2" O.D. Also makes single 37° S.A.E. standard and oversize flares. Adapters revolve for quick size change and act as positioning gauge for tube. For portable use or can be vise mounted. Sliding handle gives maximum leverage. Wt. 4 lbs.

P/N 12-00205 .....



## 37° DOUBLE LAP FLARING TOOL KIT

Our 37° Double Lap Flaring Tool Kit includes the double lap flaring tool above which forms 37° double lap flares to AN10078 in soft copper and aluminum tubing (wall thickness to .040"). Flares tubing sizes 3/16", 5/16", 3/8", and 1/2" O.D. Also includes a tubing cutter, an inner-outer reamer, and a plastic carrying case. A quality tool kit which is made in the U.S.A.

P/N 12-00210 .....

## BRAKE LINING & GENERAL RIVET SETS



Standard Model - Designed especially to economically reline brakes, this riveting set is a handy tool for many other jobs where rivets are used to fasten leather, canvas, plastic & metal parts.

P/N 824 .....

Brake lining Rivets.....P/N 06-02300 .....ea

**DELUXE MODEL** - Our deluxe model brake relining tool makes it virtually impossible to botch a brake relining job. The threaded screw action of the rivet insertion tool insures a perfect roll on brake rivets every time without damaging the liner. ....P/N 12-20810 .....

### Replacement Parts

- (a) Anvil .....P/N BR-1005 ...../ea.
- (b) Knockout Punch.....P/N BR-1006...../ea.
- (c) Rivet Set.....P/N BR-1007 ...../ea.
- (d) Threaded Replacement-Punch...P/N BR-1006...../ea.



## PARKER TYPE AIRCRAFT TUBE BEADING TOOL

The Parker Beading Tool has been the number one choice of aircraft mechanics for making clamping beads in metal tubes. To this day, no other tool even comes close to matching its quality. So by special arrangement, the manufacturer tooling up

to recreate this classic tool in every detail. In the process they have added a few enhancements of their own, such as ground, hardened, and polished surfaces for mar-free beads in aluminum, copper, brass, and mild steel tubes ranging from 1/4" to 1" diameter. Meets MILSPEC MS33660D and SAE AS5131 standards. P/N 12-01049.....

## IMPERIAL 664-FH-08 180° TUBING BENDER



The 664-FH-08 Heavy Duty 180° Tube Bender line for 1/2" stainless steel and other tough tubing metals! Its patented ROTO-LOK™ quick action trigger release two-stage handle allows the tubing to be bent up to 180° without crossing the hands or handles! This means bends are made with reduced effort and much better control.

P/N 12-02081 .....

## IMPERIAL 470-FH TRIPLE HEAD 180° TUBING BENDER



The 470-FH Triple Head 180° Tube Bender bends 4 diameters of tubing with just one tool! It handles soft copper, aluminum and thin-walled steel tubing in 3/16", 1/4", 5/16" & 3/8" diameters. Like the heavy duty 464-FH, it features the patented ROTO-LOK™ two-stage handle that allows east fabrication of bends up to 180°. It also features optimized bending grooves that allow the user to bend the tubing in the smallest

radius possible to enable tighter turns and minimize the space taken by the bends. Soft copper - .030-.032" wall. 304 stainless steel - .030-.032" wall.

P/N 12-01042 .....

## ATS HAND RIVET SQUEEZER



The newest addition to our ATS Pro Rivet Squeezer Line is built for hard use, but we must admit it's also one of the best looking squeezers we've ever seen. It's an all stainless steel design that's constructed to last a lifetime. The unique unibody styling is drop forged for extra strength and CNC machined to tight tolerances. The yoke (also stainless steel) is engineered to be half the weight of other yokes, yet retain full strength. Finally, the whole thing is beautifully finished in a brush satin look and highly polished surfaces. Has a very solid feel, and professional look that will complement anyone's toolbox. Squeezes up to 5/32" aluminum (1/8" seal) rivets. Works with any rivet sets, or dipie dies having a 3/16" (.187") shank. Adjustable ram does not need shims. Lifetime warranty.

Features: •1.5" Yoke •Drop forged from Stainless Steel for unmatched strength and durability •Clasic brushed stainless steel finish. •Adjustable ram does not need shims •Squeezes aluminum rivets up to 5/32" and steel rivets up to 1/8" •Comfort grip rubber handles •4lbs shipping weight.

P/N 12-01620 .....

## PROFESSIONAL RIVETING KIT



This Professional Riveting Kit has all the tools you need to drive rivets like a pro... It contains the best-selling ATS Pro Series 3X Rivet Gun, a selection 4 of our most popular Bucking Bars (141, 142, 148, and 149), plus a complete assortment of Rivet Sets to install Universal Head (AN470) or Flush (AN426) rivets in sizes 3/32" to 3/16".

And it all comes to you in a stylish molded case to keep things neatly organized. This is the perfect "field" kit to take with you anywhere -- it has the riveting tools you need conveniently laid out in one handy ready-to-go package. The Professional Riveting Kit is a part of our ATS-PRO Series, so you can rest assured that your tool investment will be well protected by an Unconditional 30 Day Money Back Guarantee, and industry-leading ATS Pro Lifetime Warranty. 19lbs shipping weight.

P/N 12-01698 .....

TO

# RIVET SQUEEZERS – RIVET SETS

## SPRING TENSION CLAMPS



Spring tension clamps can be applied in a fraction of the time required for ordinary screw clamps. The AT542 clamp, with 2" throat depth, has a Zamak alloy yoke and a steel spring which provides a 70 lb. clamping pressure. Designed for use with sheet holder pliers.

P/N AT542..... /ea.

## SIDE GRIP CLAMPS



Designed to hold two or more work pieces together where no holes exist. Clamping force is applied at edge of work. Spring loaded, plier actuated. The lack of a takeup screw makes it impossible to over-tighten and damage the work surfaces or the clamp. Clamping capacity - 0-1/2". Jaw depth: 1/2" and 1". Length: 2-3/16".

P/N SC-1/2-1..... /ea.

## AT-114C3 QUICK-CHANGE RETAINER SPRING



Makes possible the changing of rivet sets without removal of retainer spring. For .402" shank dia. rivet sets.

P/N AT-114C3..... /ea.

## AT 107A FLUSH RIVET SETS



Large radii at critical points to prevent breakage. Slightly crowned, highly polished face designed for rapid flush riveting where a smooth skin surface is essential. Shank dia. .401".

Part No.	Face Dia.	Length	Price
AT-107A-1	1"	2-3/4"	.
AT-107A-3	1-1/4"	3-3/4"	.

## AT 100A STRAIGHT RIVET SETS



Cup surfaces are highly polished and guaranteed to conform with rivet heads. Carried in stock in AN470 (MS20470) universal-head cup shape. Overall length, 3-1/2", .401" dia. centerless-ground shank.

AT-100A-3-3/32..... 3/32".....  
 AT-100A-3-1/8..... 1/8".....  
 AT-100A-3-5/32..... 5/32".....  
 AT-100A-3-3/16..... 3/16".....

## AT 101A OFFSET RIVET SETS



Same tool as AT100A but has 10° bend 1" back from the cup to allow added clearance. Permits easier riveting where obstructions are encountered.

AT-101A-3-3/32..... 3/32".....  
 AT-101A-3-1/8..... 1/8".....  
 AT-101A-3-5/32..... 5/32".....  
 AT-101A-3-3/16..... 3/16".....

## HAND RIVET SQUEEZER



Designed to squeeze 1/16" - 5/32" rivets and dimple 1/16" - 3/16" in material up to .040" thickness. Takes standard 3/16" shank rivet squeezer sets. With adjustable ram and 2-piece C-yoke of heat treated 4130 steel. Throat depth: 1.25". Gap: 1-1/4". Overall length: 14". Best quality squeezer on the market. Made in USA

P/N 12-00300.....

### YOKES FOR RIVET SQUEEZER

1-1/4" X 1" Reach..... P/N 12-00308.....  
 1-1/4" X 1-1/2" Reach..... P/N 12-00309.....  
 1-1/4" X 2" Reach..... P/N 12-00310.....  
 2" X 2" Reach..... P/N 12-00315.....  
 1-1/4" X 2-1/2" Reach..... P/N 12-00318.....  
 1-1/4" X 3" Reach..... P/N 12-00320.....  
 1-1/4" X 3-1/2" Reach..... P/N 12-00321.....  
 1-1/4" X 4" Reach..... P/N 12-00322.....  
 1-1/4" X 5" Reach..... P/N 12-00323.....  
 1-1/4" X 6" Reach..... P/N 12-00324.....

## SWIVEL HAND RIVET SQUEEZER



This tool incorporates a 3/8" stroke and 5/8" ram adjustment. The full 360° yoke can be locked in any position in relation to the handles. Uses standard squeezer sets with 3/16" shank diameter. Yoke depth: 1-1/2".

Model AT502AH-D..... P/N 12-00400.....

## INSTRUCTIONS FOR SELECTING RIVET SETS

To develop maximum power, the riveter must drive the rivet near the end of the riveter's stroke. For maximum power the combined length of the two rivet sets must be of the correct length. Determine the correct length as follows:

**WHEN TWO CUPPED RIVET SETS ARE USED** – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the total thickness of the material being used.

**WHEN TWO FLUSH SETS ARE USED** – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the overall length of the rivet after it is driven.

**WHEN ONE CUPPED SET & ONE FLUSH SET ARE USED** – The sum of the two rivet sets "L" dimension should equal the closed height dimension of the yoke minus the total thickness of the material being riveted and the height of the finished rivet head driven by the flush set. If necessary, select rivet sets a little short and shim to proper length with hardened shims listed in the table. The closed height dimension of the yoke referred to above is the opening available when jaws of plunger are in extreme closed or forward position with both rivet sets in place.

## RIVET SETS FOR SQUEEZER



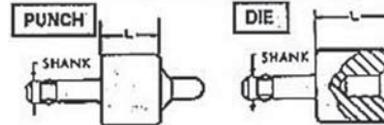
Assorted Squeezer Set. 5-piece, consisting of rivet sets for 3/32, 1/8 and 5/32" AN470 rivets, and one flat set. Shank dia. 3/16".

P/N 26-5.....

## DIMPLING SETS FOR SQUEEZER

FASTENER	AN 426 RIVET			
SIZE	3/32	1/8	5/32	3/16
DASH NO.	-3	-4	-5	-6
BODY LENGTH	1/4	3/8	1/2	
DASH LETTER	-P	-R	-S	

When ordering, specify:  
 Basic Part No. - Rivet  
 Size No. - Body Length,  
 Letter. PN PER SET 1  
 PUNCH 1 DIE



Part No.	Price	Part No.	Price	Part No.	Price
207/206-3-P	.	207/206-4-R	.	207/206-5-S	.
207/206-3-R	.	207/206-4-S	.	207/206-6-P	.
207/206-3-S	.	207/206-5-P	.	207/206-6-R	.
207/206-4-P	.	207/206-5-R	.	207/206-6-S	.



## CUPPED SQUEEZER SETS

"L" Dimension	Mfg P/N	Part Number	Price
1/8"	AT108AN	AT108AN-1/8	.
1/8"	AT108AP	12-01660	.
1/8"	AT108S	AT108S-1/8	.
1/8"	AT108AR	AT108AR-1/8	.
3/32"	AT108AR	AT108AR-3/32	.
3/32"	AT108AP	12-01661	.
3/32"	AT108AN	AT108AN-3/32	.
3/32"	AT108S	AT108S-3/32	.
3/16"	AT108AP	12-01163	.
3/16"	AT108S	AT108S-3/16	.
3/16"	AT108AR	AT108AR-3/16	.
3/16"	AT108AN	AT108AN-3/16	.
5/32"	AT108AP	12-01662	.
5/32"	AT108AR	AT108AR-5/32	.
5/32"	AT108AN	AT108AN-5/32	.
5/32"	AT108S	AT108S-5/32	.



## FLUSH RIVET SETS

L" Dimension	Part No.	Price
1/8"	AT109AN	.
1/4"	AT109AP	.
3/8"	AT109AR	.
1/2"	AT109AS	.

TO

# COUNTERSINK CUTTERS

## MICROSTOP COUNTERSINK CUTTER KIT AT590CSK



This kit provides countersinking versatility with nine different 1/2" diameter cutters, six of the most commonly used foot pieces, and a high-speed bearing-constructed microstop. The microstop controls cutting depth in .001 increments, from 0 to 5/16". Cutters-ground on-centers to ensure concentricity-are 100°, with pilot diameters #40, #30, #21, 3/32", 1/8", 3/16", and 1/4".

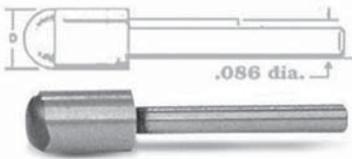
P/N 12-00824.....

## 100° AT455 COUNTERSINK CUTTER



Designed for operating in angle drills with 1/4-28 threads and in the AT441SLS Micro Stop Countersink. Has 1/4-28 threaded shank. Cutter angle 100°. AT455D-4 has 7/16" dia. cutter head. Use with AT484 pilots. P/N AT455D-4.....

## AT484 PILOTS



AT484 replaceable pilots have a .086" dia. shank with a flat to accommodate the set screw of the AT455 cutter. An undercut permits the head to seat on the cutter angle. Order by P/N..... ea.

Part No.	Head Dia. "D"	Part No.	Head Dia. "D"
AT484-2	#40	AT484-56	3/32
AT484-12	#30	AT484-57	1/8
AT484-21	#21	AT484-59	5/32
AT484-31	#11	AT484-61	3/16
AT484-32	#10	AT484-63	7/32

## AT441 HSS MICROSTOP COUNTERSINK



AT441 HS Micro Stop Countersink, similar to the AT442SLS unit, except with 1/4-28 female threaded nose to accommodate AT455 cutter. P/N 12-01591.....

## AT 442 HS MICRO STOP COUNTERSINK



A precision tool for production countersinking. Ball thrust bearing for absolute depth control. Adjusts in .001" increments, with positive adjustment lock. Skirt accepts cutters up to 5/8" dia. Has 1/4-28 male threaded shaft for use with AT418 cutters. Can be assembled and disassembled without special tools. Split shaft and taper

locks pilot in place when cutter is tightened. Order cutters and pilots separately. P/N AT442-SLS.....

## MICRO-STOP COUNTERSINK CAGES AND NYLONFOOT PIECE



2 Models available-one with NEEDLE bearing and one with BRONZE bushings. .001" increment depth adjustment. Positive adjustment lock. 1/4" dia. shank. 9/32" shaft travel. 9/16" cutter capacity. For 1/4-28 threaded cutters. Comes with "NO-MAR" foot piece. Rated at 3,000 RPM. Made in USA.

With Bronze Bushings P/N 12-01412.....

With Needle Bearings P/N 12-00940.....

## BRAKE RIVET SET



Use these sets with your hand squeezer. Will set brake rivets eliminating the possibility of cracking your brake pads.

P/N 12-00550.....

## AT 409 SERIES STRAIGHT SHANK COUNTERSINK WITH INTERCHANGEABLE CUTTERS AND PILOTS



Assembly, consists of AT418E (1/2") cutter, AT416 pilot and AT409-1, 1/4" straight-shank. Has a collet-type shaft to securely hold the replaceable pilot.

**When ordering specify: Part number of cutter and pilot dia.**

**Assembly Example:** AT409 with 100° cutter A418E & 1/8 pilot.

(AT416-57) ..... Adapter only.....P/N AT409-1.....

## AT418 STOP COUNTERSINK CUTTERS



Three-straight flute replaceable pilot cutters with female thread. These cutters are designed with extra deep flute to permit numerous sharpenings and radial clearance to assure fast smooth cutting.

For Replaceable Pilots Refer to AT416 Series. Used With AT418

Part No.	Cutter Dia.	Thread Size	Pilot Hole	Price
AT418A-4	1/4"	1/4 - 28	.086	.
AT418D-4	7/16"	1/4 - 28	.086	.
AT418E-4	1/2"	1/4 - 28	.086	.

## 120° AT418 COUNTERSINK CUTTER

Same type cutter as described above except with 120° Cutter Angle. 7/16" Cutter Diameter. P/N AT418D-7.....

## AT416 PILOTS



Fit AT418 cutters. Undercut permits head to seat on cutter angle. Order by Part No. in table below.

Order by part Number..... Ea.

Part No.	Head Dia. "D"	Part No.	Head Dia. "D"
AT416-2	#40	AT416-56	3/32
AT416-12	#30	AT416-57	1/8
AT416-21	#21	AT416-59	5/32
AT416-31	#11	AT416-61	3/16
AT416-32	#10	AT416-63	7/32
		AT416-65	1/4

TO

# PLIERS – PUNCHES – BRAKES



## HAND SEAMER

Handy tools for comparatively light work. Wide, deep jaws machined for smooth parallel fit. Form precise folds and seams. Strong, lasting drop-forged steel construction. No. 44 has plain 3 1/2" wide blades. No. 44r is similar with a radius to prevent tearing of aluminum and other light metals. No. 793 has a 3 1/2" wide blade with adjustable depth gauge. P/N 12-00620 .....



## HAND SEAMER TP44

• Wide, deep jaws machined for smooth parallel fit • Forms precise folds and seams • 1" deep x 3-1/2" wide throat P/N 44R .....



## ROPER-WHITNEY METAL CRIMPER

Handy crimping tool to disperse excess metal. Depth of throat 1-1/8". Overall length 9". Wt. 1 lb. P/N 111 .....

## ROPER-WHITNEY NOTCHER

Designed for fast, accurate 32° notch in sheet metal. Hook design of jaws permits notching to exact desired depth without slippage. Spring-return jaws. Capacity 20 ga. Wt. 1 lb. P/N 141 .....



## FLUTING PLIERS

These aircraft-type fluting pliers are a drop-forged quality tool. Non-marring working surfaces of jaws specifically designed for use on aircraft components. Comfort grip handles. P/N 12-00500 .....

## HOLE FLANGING TOOL

A real time saver for flanging lightening holes. Non-marring. Easy to use. Nylon rollers and ball bearings assure long life. P/N 12-00600 .....



## MIGHTY ROD SHEET METAL BENDER



Designed to bend solid round, square and flat alloys into nearly any shape and angle. FEATURES: • Works on solid materials up to 3/8" diameter. • Coils and bends wires of many sizes. • Includes dies for 1/2", 3/4", 1", 1 1/4" & 1-1/2" diameter bends. • Constructed of 3" x 3" aluminum base 1" thick with a 12" handle 7/8" in diameter. • Made in the USA. • 1 year Replacement Warranty. P/N 12-00934 .....

## JUMBO ROD SHEET METAL BENDER



Constructed of 4" x 6" aluminum base 1" thick with a 16" handle 7/8" diameter. Bends solid round, square and flat iron. FEATURES: • Works on solid materials of up to 3/8" round and square (1/2" wide flat). • Coils and bends wire of many sizes. • Bends metal to any shape and degree of angle. • Include dies for 3/8", 3/4", 2", 3" & 4" diameter bends. • Installs on any vise. • Ideal for hobbyists, prototype shops and do-it-yourselfers. • Made in the USA. P/N 12-00935 .....



## MAGNUM BENDER

For many homebuilders, the production of high quality aircraft metalwork can be a daunting prospect. There can be hundreds of intricate fittings to produce and many will require accurate bending. Magnum Bender has a BIG capacity and is capable of bending 1/8" thick x 6" wide 4130N. Magnum bender uses sets of interchangeable bending bars each with two different radii to produce high quality bends, up to, and including 90 degrees. Bending bars are hardened and polished and allow for material 'spring back'. The Magnum Bender is available as either a standard version with 1/16", 3/32", 1/8", 5/32", 3/16" and 1/4" radii. Or, as a metric version, with 3 bending bars offering 1,2,3,4,5 and 6mm radii. Each machine is supplied with two pairs of operating levers, 1 ft. long and 2 ft. long. Standard version ..... P/N 12-01550 ..... Metric version ..... P/N 12-01551 .....

## ROPER-WHITNEY METAL PUNCH



**#5 JR. HAND PUNCH** – with one ton punching power. Punches 1/4" hole through 16 Ga. mild steel. Throat clearance 1-3/4". Complete set in metal box with 3/32, 1/8, 5/32, 3/16, 7/32, 1/4 and 9/32" punches & dies. Wt. 4-1/4 lbs. P/N 12-01600 .....



**BENCH MOUNT BASE** – for stationary use. Base swivels to any position. Punch is held by L-shaped clamp rod through a 7/16" or larger hole in bench. P/N 12-01700 .....

**STRAIGHT PUNCH & DIE SETS** – for No. 5 Jr. punch in the seven sizes shown below.

3/32"	#12-01800	7/32"	#12-02200
1/8"	#12-01900	1/4"	#12-02300
5/32"	#12-02000	9/32"	#12-02400
3/16"	#12-02100	Each Size	/set



## COMBINATION PUNCH & DIMPLING DIE SETS

– For #5 Jr. punch. Punch and dimple in one operation. 3/32, 1/8 or 5/32" 100° punch & dimpling die sets.

1/8" .....	#12-02500 .....
3/32" .....	#12-02600 .....
5/32" .....	#12-02700 .....

## ECONOMY MODEL BENDING BRAKE



For bending and forming. Makes clean, smooth bends and forms up to 90° in metals. 18" & 30" handle up to 16GA aluminum. 40" handles is up to 20GA sheet metal, 18GA aluminum. All include brake bars. Clamps not included. Made in USA.

Up to 18" width stock .....	P/N 12-02800 .....
Up to 30" width stock .....	P/N 12-02810 .....
Up to 40" width stock .....	P/N 12-02815 .....

## HEAVY DUTY BENCH BRAKE



This small, compact brake is excellent for all tough fabrication and repair jobs. The radiused dies make it possible to form those difficult materials such as 2024T3, 4130, and stainless without fear of cracks. Features solid steel bar construction, heavy duty clevis hinges, and portable bench mounting. Includes 2 sets of assorted width reversible dies with 1/16", 1/18", and 3/16" radii, plus complete

instructions. Ideal for machine shops, aircraft, race car, boat builders, avionics installers, & auto repair shops. P/N 12-02850 .....

## ORIGINAL LANCASTER PORTO-METAL FORMER



The Porto-Metal Former makes the specialty angle needed in minutes. Can be used on the work bench or in a vise to make inside angles, outside angles, straight bends - even circles, to a radius as small as 3". Jaws are made of hardened alloy steel. Works 18 gauge soft steel, 20 gauge stainless, 16 gauge aluminum up to 2" in width. 45 to 1 leverage for powerful press. Special malleable iron body will not break as we have found with cheaper imitations. Order #LSH-71 metal shrinker for inside angles. Order #LST-82 stretcher for outside angles. Wt. 12 lbs. each.

#LSH-71 Shrinker .....	P/N 12-19800 .....
#LST-82 Stretcher .....	P/N 12-19900 .....
Combination Shrinker/Stretcher Tool .....	P/N 12-02950 .....

Either unit can be converted into its opposite by ordering complete conversion kit, includes jaws, blocks & wire.

**MOUNTING PLATE** - installs on shop vice to allow mounting of shrinker and stretcher ..... P/N 12-00494 .....

TO

# RIVET GUNS

## G-28 HAND RIVETER GUN

The Cherry G-28 is a lightweight (13 oz.) ruggedly compact hand tool designed to efficiently set a broad range of Cherry commercial rivets. A unique torsion spring keeps the lever arm in place, ready to accept rivet after rivet. The G-28 comes with two popular size nosepieces, 728A9-4 (to set Cherry N Rivets - 1/8" dia. & Cherry Q Rivets - 1/8" dia.) and 728A9-6 (to set Cherry N Rivets - 5/32" & 3/16" dia. & Cherry Q Rivets - 5/32" & 3/16" dia.), one of which is stored securely out of the way in the riveter handle.

P/N 12-03000.....



## CHERRY G-29 HAND RIVETER

The Cherry® G-29 Hand Riveter is an efficient, compact, lightweight tool for installing Cherry® NUT-PLATE rivets. It comes equipped with a 728A9-3 nosepiece to install 3/32" rivets and has a 728A9-104 nosepiece stored in the handle for installing 1/8" rivets. The G-29 Riveter is 9-1/4" long, weighs just 13 ounces and is intended for use when access or power limitations prevent the use of Cherry® power tools.

P/N 12-00701.....



## CHERRY G-27 HAND RIVETER KIT

The Cherry G-27 Hand Riveter is designed specifically for the most efficient installation of 1/8" CherryMAX Rivets. The G-27 Riveter is intended for use where access or power limitation prevents the use of Cherry pneumatic power tools. Overall length of the G-27 is 9-1/4", the net weight is just 13 ounces and the pulling head is an integral part of the tool. This compact, lightweight tool comes in a rugged plastic case.

P/N 12-03105.....



## RIVET KIT

The Deluxe hand riveter kit includes 200 assorted Klik-Fast rivets in popular sizes. The molded plastic case houses and protects the tool, rivets. G-28 Rivet Gun not included. Weight 4 lbs.

P/N 12-03100.....

## 120° FLUSH DIMPLING TOOL

This unique tool for 1/8" 120° countersunk "Pop" rivets attaches to the Cherry G-28 standard hand "Pop" rivet gun. Simple design makes dimpling foolproof, quick and easy, with no cracking of metal. For use on aluminum to .040" thickness.

P/N 17014.....



## ADJUSTABLE RIVET SPACER

For uniform spacing of rivets, bolts, nails, etc. Unique fan design expands to 36". Equally spaces up to 20 holes between 2 given points. Made of 301 stainless steel.

P/N 12-11700.....

10 Hole spacer P/N 12-00184.....



## RIVEDRILL™

Allows operators to set up to 14 rivets per minute - twice as many as can be set by standard hand tools. The RiveDrill is ergonomically friendly, requiring just 6.6 lbs. of pressure to operate, compared to 77.2 lbs. required for hand tool operation. Excellent for working on aircraft, autos, or boats. The RiveDrill™ can be quickly inserted into a 3/8" reversible power drill as any standard drill bit would and is able to set any standard blind rivet up to 3/16" aluminum. The shank of the rivet is expelled when the drill is operated in the "reverse" mode. (For cordless electric power drills, a minimum 12V battery is recommended.) Nosepieces for 1/8", 5/32", & 3/16" sizes are included. RiveDrill™ Specifications: • Model 110 • Wt: .618 Lbs. (280 grams) • Length: 5.5 in. (1441 mm) • Diameter: 2.4 in. (60 mm) • Battery for cordless drill: 12V • Nosepieces included: 1/8", 5/32", 3/16" • Drill Types: Cordless, Electric, Pneumatic • Rivet capacities: 1/8", 5/32", 3/16" aluminum standard rivets; 1/8", 5/32" steel standard rivets; 1/8" stainless standard rivets.

P/N 12-00253.....

## ULTRALITE NUTPLATE DRILL MOTOR

Ergonomic, lightweight design. Only one hand required to locate, drill & countersink both holes. Easily convert rivet spacings with interchangeable foot attachments. Available in single wing, double wing & mickey mouse models. Accommodates all nut-plate spindle spacings from 0.219" to 1.125". Fully adjustable feed rate. 600 or 7,000 RPM

P/N 12-01376.....



## SWIVEL RIVETING TOOL

Rotates 360° and rivets in any position. High leverage handles for added power. Hardened steel construction for long life. Extended nose for hard to reach places. Will pull 3/32", 1/8", 5/32", and 3/16" rivets. Model TP844.....

P/N 12-00365.....



## ATS AIRCRAFT RIVET GUN #2602

So controllable you can easily buck rivets as small as 3/32" to as large as 3/16".

P/N 12-18340.....

## RIVET SET MAX FOR 2602 RIVET GUN

3/32", 1/8", 5/32" and 3/16" rivets.

3-1/2" (5 pcs. straight, includes flat) P/N 12-18341.....

3-1/2" (4 pcs. offset) P/N 12-18342.....

5-1/2" (4 pcs. straight) P/N 12-18344.....

## PROFESSIONAL HAND PLIER RIVET TOOL



Professional Hand Plier Rivet Tool is 50% easier to use than other hand tools. A patented compound link designed does the work for you. A shorter grip opening ergonomically designed for one hand operation. Grips cover the length of the lever and body, and soft handles are contoured to fit the hand.

The wrench and nosepieces (3/32", 1/8", 5/32", & 3/16") are stored in the handle of the tool. Excellent for use on Cherry and other standard pop rivets.

**Features:** • Robust aluminum casting and vanadium steel handle design • Setting capacity: aluminum rivets up to 3/16" (4.8 / 5.0mm) body diameter • Contoured handle grips for comfort • Rivet retaining handle design for one-handed riveting • Supplied with nosepieces for 3/32", 1/8", 5/32" & 3/16" (2.4mm, 3.2mm, 4.0mm & 4.8mm) rivets • Supplied nosepiece wrench • Length: 9.65" (245mm) • Weight: 1.3 lbs. (0.6 kg)

P/N 12-00178.....

## HEAVY DUTY RIVETER



Includes four nosepieces to set rivet diameters from 3/32" up to 3/16". Convenient lock chain keeps handles closed when tool is not

in use. Made in U.S.

P/N 12-18352.....

## 3M™ RIVETERS TAPE

3M™ Riveters Tape 685 Transparent Film with Green Adhesive, 1.7 mils (.043 mm) Polyester film with a rubber-strip coated along edges of tape only and tack-free center Window

P/N 12-18355.....



FOR MORE 3M™ PRODUCTS SEE PAGES 345-352

## COMBINATION RIVET-RIVNUT TOOL

The D100-RN hand operated hydraulic tool is ideally suited to the needs of the aircraft homebuilder. The tool develops 3,500 lbs. of pulling force which permits the installation of all Cherry Commercial Blind Rivets or any other Pop type rivets through 1/4" diameter as well as all CherryMax rivets through 3/16" diameter. Will not pull Cherry Lock rivets. The D100-RN quickly converts to a threaded blind nut setter to allow efficient installation of Rivnuts or similar blind nuts. The kit includes the D100 hydraulic tool with adapters for blind rivet and blind nut installation, rivet nosepieces for 1/8", 5/32" and 3/16" diameter blind rivets, blind nut pull-up studs with nosepieces for 6-32, 8-32, 10-32 and 1/4-28 Rivnuts, operating instructions and a rugged Plastic storage case. Size: 12-1/2" x 8-1/4" x 3". Weight: 3 lbs.

P/N D100-RN Kit.....



## PNEUMATIC-HYDRAULIC BLIND RIVETER

The PT-100-1 power riveter, no larger than a compact drill motor, will install virtually any straight-pull blind rivet with installation loads of 3500 lbs. or less. All blind rivets from 3/32" dia. up to and including 1/4" dia. CherryMax rivets can be installed with the P-100-1. It utilizes a patented two-valve hydraulic pump actuated by 90 to 130 PSIG air pressure. Unlike most riveters, the P-100-1's collect/jaw assembly remains stationary while the outer sleeve-nosepiece assembly is hydraulically moved, creating sufficient load to install the rivet. Furnished with three nosepieces for 1/4", 1/8", 3/16"

& 3/32" rivets. Wt. 29 oz.

P/N 09-01070.....



TO

# RIVNUT TOOLS – TAPE MEASURES

## L-6000 RIVNUT SPEED DRIVER

This tool is designed for light production and features high speed push-pull, smooth, spiral action. Sized #4 through #10 adequate for brass, aluminum, and steel. Sized #4 through #8 adequate for stainless steel. Provides easy on-and-off threading of rivet nut with push-pull knob. Adjustable anvil for different length rivet nuts. Made in U.S.A. The C-6000 Speed Header is available for Rivnuts with the following thread sizes:

6-32 ..... P/N 12-12600..... 8-32..... P/N 12-12700.....  
10-32 .... P/N 12-12800..... 1/4-28..... P/N 12-12900.....

**CONVERSION KIT** - For changing speed header to a different Rivnut thread size. Order by P/N .

6-32 Kit .... P/N 12-13000 ..... 8-32 Kit..... P/N 12-13100.....  
10-32 Kit.. P/N 12-13200 ..... 1/4-28 Kit.. P/N 12-13300.....

## L-7000 RIVNUT SPEED DRIVER

Designed for light production. Same as the L-6000 except made with a longer stroke for slotted rivet nuts. Made in U.S.A. Order by part number. Available in the following thread sizes: 6-32 (P/N 12-13605), 8-32 (P/N 12-13610), 10-32 (P/N 12-13615), and 1/4-28 (P/N 12-13620)

## C-845 ECONOMY RIVNUT TOOL

Model L-845 wrench type rivnut tool is for field repair & experimental use. Adequate for aluminum, brass, steel, and stainless. Made in U.S.A. Order by part number. Available in following thread sizes:

6-32 ..... P/N 12-13400..... 8-32..... P/N 12-13500 .....  
10-24 ..... P/N 12-13600..... 10-32..... P/N 12-13700 .....  
1/4-20 ..... P/N 12-13800..... 1/4-28... P/N 12-13900 .....

## L722 WRENCH TYPE RIVNUT TOOL

L722 Wrench Type Riv-Nut installation tool for the larger size fasteners 5/16" up to 1/2", tool comes with long arm allen wrench with plastic handle for easy installation.

L722 wrench type header	Part No.	Price	L722 wrench type header	Part No.	Price
5/16-18	12-00920	.	5/16-24	12-00921	.
3/8-16	12-00922	.	3/8-24	12-00926	.
1/2-13	12-00927	.	1/2-20	12-00928	.
M10	12-00930	.			

## WRENCH TYPE RIVNUT TOOL

Kit includes: TP726A, TP726B, TP726C, TP726N, and handy case. •Perfect for field repair and experimental use • Easy to use - inserts from one side of the work in seconds • Excellent for close quarters, overall height less mandrel 1-1/2" • Uses 3/4" open end or socket wrench • TP726N Notcher manually operated • Made in the U.S.A.

Model	Part No.	Price
TP726A / 6-32	12-00348	.
TP726B / 8-32	12-00349	.
TP726C / 10-32	12-00350	.
TP726N/Notcher	12-00351	.
TP726K / Kit	12-00352	.

## L-1000 ECONOMY HAND RIVNUT TOOL

The L-1000 economy hand rivnut tool is recommended for slotted rivet nut fasteners. Adequate for aluminum, brass, steel and stainless steel fasteners. Made in U.S.A. Order by part number. L-1000M is same tool, except in metric sizes.

Model	Thread Size	Part No.	Price Ea.
L-1000	(60-32)	12-13645	.
L-1000	(8-32)	12-13650	.
L-1000	(10-32)	12-13655	.
L-1000	(1/4-28)	12-13660	.
L-1000M	(M6)	12-13675	.

## HEAVY DUTY RIVET CUTTER

This high quality, durable rivet cutter features all steel construction and cuts 1/16" to 1/4" diameter rivets. It is adjustable for 1/4" to 3/4" long rivets. P/N 12-16840 .....

## RIVET CUTTER

This handy rivet cutter, w/ 2 hardened blades, cuts rivets of any standard dia. from 3/32" to 3/16" without burring. The length of the cut rivet can be varied from 3/16" to 5/8" by means of 8 adjustable leaves attached to the cutting head. Plastic coated grips. Wt. 2 lbs. P/N 12-00200 .....

## BENCHTYPE RIVET CUTTER

Cuts 5 different diameter rivets, as well as wire and screws to 7 different lengths. Made of hardened and ground steel, this rivet cutter can be easily fastened to a workbench or held in a vise. Accepts rivet diameters 1/16, 3/32, 1/8, 5/32, 3/16, Will cut to lengths: 5/32, 7/32, 9/32, 11/32, 15/32, 17/32. P/N 12-00262 .....

## LUFKIN METRIC/INCH TAPE MEASURE

LUFKIN NO. W9210ME Has 1/2" blade, 3 meters long (equal to about 10 ft.). Markings are on one side only, with millimeters on upper edge and inches to 16ths on lower edge. White face.

P/N 12-19700 .....  
Replacement Blade (RY23CMF).....P/N 12-19750 .....

## STANLEY DECIMAL INCH TAPE MEASURE

This 12-ft. steel tape measure with 1/2" blade is graduated in tenths & hundredths of inches and also in fractions of inches (32nds). Very handy for all aircraft construction. A must for building composite aircraft.

P/N 33-272 .....

## SMART TOOL DIGITAL INCLINOMETER

Smart Tool is a unique digital inclinometer with up to 0.1° of repeatable accuracy. Place Smart Tool anywhere and it provides an accurate digital readout of angular reading instantly with no interpretation or guesswork needed. It measures and displays any angle through 360°, and readings can be relative to any angle. Smart level even calculates complicated slope measurements in either percent or inches per foot. It is sunlight viewable, features 3 sensitivity settings, and has 120-hour battery life with auto shut-off. Smart Tool is ideal for fixture work, tube bending, metal forming, body work, drive shaft angles, camber, caster, and A-arm angles, and a wide variety of other applications in the aircraft and race car building industries. Also ideal for coordinating and aligning flight control surfaces. Compact & rugged, Smart Tool is powered by any 9V battery.

Smart Tool in 24" rail.....P/N 12-21365 .....  
Smart Tool in 48" rail.....P/N 12-21370 .....

## INSTANT ANGLE FINDERS

MODEL 200M (2-3/4" Dia. Dial) - Very versatile tool —ideal plumb bob. Magnetic base and center hang hole. Body of high impact ABS plastic. Dial protected by acrylic cover. Angle and rise chart on back.

P/N 12-14800 .....

## PRO 360 DIGITAL PROTRACTOR

The Pro 360 Digital Protractor is a revolutionary measuring tool that provides an immediate, digital reading of all angles in a 360° circle. The machined aluminum frame is a rigid, light weight, ultra-precise platform that allows the state-of-the-art sensor and its microprocessor circuit to provide unsurpassed accuracy throughout the Protractor's 360° range. Typical used by aircraft builders, maintenance personnel and airport operators. P/N 12-20125 .....

## PRO 3600 DIGITAL PROTRACTOR

The PRO-3600 is accurate to 0.01° and has an RS-232 compatible serial port for a computer interface and SPC records keeping.

P/N 12-00759 .....

## UNI-MAG WRIST BAND MAGNET

Uni-Mag is a wrist worn magnet that allows craftsmen to keep parts close to hand while working rather than in your pocket, on a ladder, or in your mouth. It holds nuts, bolts, screws, nails, tools, etc. A specially created magnetic field allows parts to lay flat on the face of Uni-Mag rather than upright. Save time and put an end to fumbling for small hardware with Uni-Mag. Comes complete with magnet and wristband. P/N 12-30110 .....

## RIVET CONVERSION KITS

Converts your conventional hand pop riveter into an economical RivNut installer tool.

Size	Part No.	Price
6-32.....	12-13680.....	
8-32.....	12-13681.....	
10-32.....	12-13682.....	

## HOMEBUILDERS RIVET NUT TOOL

This rivet nut tool is an inexpensive alternative to industrial rivet nut setters. Fast and easy to use for the builder who needs to make sturdy installations requiring a rivet nut fastener. It has unlimited uses. Its design enables the rivet nuts to be seated tighter than with conventional tools. This fastening tool has unique uses! The rivet nut possesses far greater load bearing capability than a regular sheet metal screw! Proudly made in U.S.A. Use it instead of a sheet metal screw. Its compact design takes up less room in your tool box. For use with aluminum or steel rivet nuts.Kit includes Rivet Nut Tool, Stabilizing Rod, and Qty 1 each of 6-32, 8-32 and 10-32 rivet nuts. P/N 12-00968 .....

TO

# TOOLS

## RECOIL KITS



The Recoil System is the simple way to repair stripped or damaged threads. It provides stronger and more efficient threads which have great holding power. The system is quick and easy to use and is ideal for alloys and other light materials. The recoil insert, which is larger in diameter than the tapped hole, is compressed during installation then allowed to spring back, permanently anchoring into place. The Recoil System consists of Recoil stainless steel helically wound precision inserts, high quality HSS taps and installation tools.

Kit P/N	Size	Inserts Per Kit	Price
34600*	3/16 - 10-32	10	-
34040*	1/4 - 28	10	-
34050*	5/16 - 24	10	-
33050**	5/16 - 18 (UNC)	10	-
34060*	3/8 - 24	10	-
34070RC*	7/16 - 20	5	-
34080*	1/2 - 20	5	-
35060***	M6x1 (Metric)	10	-
35080***	M8x1.25 (Metric)	10	-
33004**	UNC Range Kit	50	-
34004*	UNF Range Kit	50	-

\*UNF - Unified Fine Thread \*\*UNC = United Coarse Thread  
\*\*\* Metric = Metric & Spark Plug (ISO)

## BLIND SKIN SCRIBE

For use on flush skin butt joints. This tool quickly and easily finds the cut line on the overlap of new metal. The lower leg slides under the new metal and hooks on the adjacent skin and the upper leg scribes the new skin as it pulled along. This tool is adjustable to suite the desired gap at the skin joint. This tool is especially handy when the old skin that is removed is damaged beyond usefulness as a pattern. Note: For use on aluminum only. P/N 12-00746.....

## 6-IN-1 COMBINATION SCREWDRIVER

• Industrial rated bits for extra long life • Heat treated 1/4" & 5/16" nut drivers • Interchangeable bits fit both Phillips & Slotted screws • Bits: 3/16" Slotted; 9/32" Slotted; #1 Phillips, #2 Phillips. P/N 12-14000.....

## SCREWSTICK POCKET SCREWDRIVER

The Screwstick is a pocket screwdriver which accepts any common 1/4" tip. An extra tip is stored in the stainless steel shaft, and a heavy duty magnet holds tips firmly in place. A steel torque driver for stubborn applications is stored in the shaft. A rubber finger grip for holding plus a heavy duty pocket clip are included. Ideal for aviation, automotive, & many other applications. Great for mechanics. P/N 12-20105.....

## BALLPOINT HEX SOCKET DRIVER

3/32" Ballpoint Hex Socket Driver for use on hex head screws and nuts. **\*This tool is commonly used with most avionics units like Honeywell Bendix/King and Garmin.** P/N 12-02063.....

## MASTER CHUCK

These versatile Master Key Chucks are available in two sizes (small & large) which open sizes 1/4" to 3/4". These tools allow you to open over 1200 different key chucks. Save wear on chucks by always having the proper key size available. The squared center of the keys opens acetylene tanks. Made of treated steel with black oxide finish. Small..... P/N 12-30165..... Large..... P/N 12-30170.....

## ALL-SHARP DIAMOND SHARPENER

All Sharp is an innovative diamond sharpener that provides 4 different grit sizes on the same tool. All Sharp sharpens and fine sharpens tools and bits and cleans burrs on hard to reach parts and equipment. It's tough stainless body will not rust and All Sharp fits in any tool tray or pouch. Model ST-7..... P/N 12-21430.....

## SCREW & BOLT SHEAR

The Screw & Bolt Shear is a bolt cutting device manufactured from very high quality tool steel which is hardened, tempered & machined to very close precision tolerances. The action of this tool is similar in nature to a "guillotine" design and is quite effective in cutting screws/bolts to specific lengths. The cutting body of the SBS-1 will accommodate screws or bolts in sizes of 4-40, 6-32, 8-32, 10-32, 10-24, 1/4-20 & 1/4-28. P/N 12-14250.....

## BOJO PLASTIC PRY TOOLS

Soft, yet strong, all Bojo tools are made tough enough to pry, but not hard enough to damage. These 4 tools are provided as a set.

**PLASTIC GENERAL WEDGE TOOL** - General narrow point for reaching in narrow spaces.

**PLASTIC STICKER/GASKET TOOL** - Wedge tip, for use where a wide area is desired with a "soft" touch.

**PLASTIC PRY BAR TOOL** - The forked tip. The original for removing door panels and plastic grommets.

**PLASTIC WEDGE PULLER TOOL** - The forked tip. The original for removing door panels and plastic grommets.

Set of 4..... P/N 12-00748.....  
**MASTER INSTALLER KIT** - Soft, yet strong, all Bojo tools are made tough enough to scrape, but not hard enough to damage. Set of 7. P/N 12-00976.....

**AIRCRAFT ASSEMBLY SCRAPER KIT** - Soft, yet strong, all Bojo tools are made tough enough to scrape, but not hard enough to damage. Set of 4. P/N 12-00977.....

**DELUXE SCRAPER KIT** - This is an expansion of our original 4 Piece Scraper Kit (which you currently buy in the medium strength material NGL). The new tips were design from request in the aviation fuel bladder cleaning industry for the US Air Force and US Navy overhaul programs. This new, stronger material is highly resistance to all forms of chemicals and sealants. P/N 12-01858.....

Description	Part No.	Price
Pry Tool Large LFT-2-N	12-01859	-
Sheet Panel ADJ Tool Kit	12-01860	-
Wire Guide Tool ATH-30-GNI	12-01857	-

## MULTI WEDGE NON-MARRING TOOL SETS

Multi Wedge non-marring tool sets allow homebuilders and avionics installers to remove panels, dash trim bezels, and other interior moldings, including door panels, without causing damage. Excellent for use in aviation, auto restoration, body work, electronics installation, upholstery etc. The Orange Set (3400) P/N 12-01671 is made of a softer polyethylene plastic blend for prying dash bezels, trims, and moldings without damaging the vehicles interior. The Black Set (3500) P/N 12-01672 is made of a more expensive high impact polycarbonate plastic for prying harder materials such as thin walled aluminum engine covers and sheet metal panels. **Product Benefits:** • Thin tip to fit into tiny gaps • Wide surface area to displace force, therefore reducing damage • Flexible • Slick surface for ease of prying • Built-in handle • Non-marring surface • Slim powerful angle • Curved tip for easy prying • Thing tip for tight gaps  
Multi Wedge Set Orange (Soft) 3400..... P/N 12-01671.....  
Multi Wedge Set Black (Hard) 3500..... P/N 12-01672.....  
**Both Multi Wedge Sets - Orange (Soft) / Black (Hard) 3400/3500**  
P/N 12-01673.....

## AT 540M SCREW EXTRACTOR

This heavy duty screw extractor is designed with a .401 shank to fit most standard rivet guns and is held in place by a retainer spring. The square tip will accommodate 3/8" socket tool bit holders with inserts for removing hex, square, Phillips, or standard screws. Manufactured from high grade shock resistant tool steel. P/N 12-01632.....

## SCREW REMOVAL TOOL

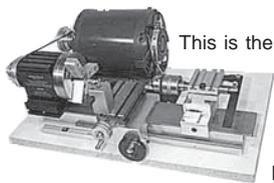
• Useful in removing screws that are corroded or have stripped heads • .401 Parker taper shank for use in rivet gun • 3/8" square socket end with 1/4" hex adapter included • Use standard Phillips or Slotted insert bits • Rivet gun required P/N 12-00827.....

## TORK-IT PRECISION TORQUE SCREWDRIVER

The Tork-It Model 36 precision torque screwdriver is a micro-setting device that is adjustable from 2 to 36"-lbs. in 0.5"-lb. increments. The tool complies with ANSI type 3 class A style 1 screwdriver grip torque wrench standards. Tork-It is supplied with a 1/4" pin-lock hex bit holder. 6-piece Hex-Bit set of 1.5mm, 2mm, 2.5mm, 3mm, 3/32 & 7/64" can be ordered separately. Tork-It Screwdriver ... P/N 12-14330.....  
Six Piece Hex Bit Set..... P/N 12-14335.....



# LATHES – MILLS



## MICRO LATHE

This is the machine you don't have to "baby". The Micro Lathe is a rugged, precision instrument. Its machined, ground and stabilized steel bed has a lifetime ball bearing spindle, coupled with a 6-speed positive v-belt drive. Spindle speeds in geometric progression from 525 to 5200rpm provide the power to "HOG" 1/8-inch cuts in mild

steel or the speed and accuracy to dust a few tenths. Other big lathe features include large .001 graduations on the cross slide dial, an all-angle tool post and a carriage depth stop. Adjustable gibs provide full compensation for carriage and cross slide wear. 2-yr. factory warranty. 15" bed. Comes factory assembled. The unit pictured is a basic unit (P/N 12-00171) with an optional 3-Jaw Chuck, Boring bar(1097E), Tailstock (1150), Drill Chuck (1091), 1/4 HP 1725 RPM Motor (1021w), Motor Mount Bracket (1022), Mounting Board (1023), and Pulleys (1162 with 3M 500 belt). All accessories are sold separately and are not included in the base price. Note: Photo shows Lathe with all accessories which are not included (Available separately). P/N 12-00171 is basic lathe unit only.

### General Specifications:

- Overall working accuracy: 0.0005"
- Max. bearing run out: 0.0004"
- Headstock normality to bed: .0004 in max error
- Max. taper bed dovetail over pins: 0.0001"
- All machine dovetails: 45°
- Bed width: 2 5/16"
- Cross slide dial graduation: 0.001
- Cross slide screw: 1/4"-20 adjustment for back-lash take-up provided (jam nut arrangement)
- Carriage travel: 0.600" 1 rev. of hand wheel
- Max. spindle speed recommend: 7000 rpm
- Motor requirement: 1/8 – 1/4 HP
- Pulley type: Std. 5/8" bore, multi-step V-belt
- Length of headstock on ways: 2.875"
- Length of carriage on ways: 3.000"
- Width of cross slide on carriage: 2.000"
- Tool post: may be adjusted for angle cutting (chamfer, boring, etc.)

### Capacity:

- Swing over bed: 4.5" (max. turning dia.)
- Swing over cross slide: 2 3/8"
- Overall length of bed: 15.5"
- Overall length of lathe: 16.5"
- Tool bit size: 1/4"
- Drill chuck capacity: 0 to 1/2"
- Distance between centers: 9.75"
- Carriage travel: 9"
- Cross slide travel: 1.75"

### Spindle Specifications:

- Sealed precision ball: 1.5748 O.D. 0.6692 I.D.
- Spindle nose: 3/4" – 16 (3/4" SAE)
- Spindle hole: 0.343
- Spindle ID taper: 15° (30° included)
- Max. collet diameter: 9/32"
- Pulley size: 5/8" bore

Accessories	Part No.	Price
3-jaw chuck	12-01602	.
Boring bar	12-01603	.
Tailstock	12-01604	.
Drill chuck	12-01605	.
1/4 1725 RPM Motor	12-01606	.
Motor mount bracket	12-01607	.
Mounting board	12-01608	.
Pulleys 20" L	12-01609	.
Pulleys 12-1/2" L	12-01710	.

## MICRO MILL

The Micro Mill has effortless, chatterless table and mill head movement. This is due to the unique design of our oversized gibs, ground steel ways, massive carriage, steel bed and vertical mill head support which makes the Micro Mill ready for CNC upgrade if you desire.

Our small mill is really a scaled down big mill with manual operation. Other big mill features include large 0.001 graduations on friction adjustable micrometer dials for X, Y, and Z controls. Adjustable gibs provide full compensation for X, Y, and Z mill-ways wear. It all adds up to the best value in small mills. 15.5" table, power switch & cord included. Comes

factory assembled. 2-yr. warranty. P/N 12-00170 .....

### General Specifications:

- |   |               |            |   |
|---|---------------|------------|---|
|   | <b>Manual</b> | <b>CNC</b> |   |
| • Height:                                     | 21-3/8"       | 26-3/8"    | • Z-axis: Steel box-ways  |
| • Width:                                      | 17"           | 22"        | • Pulley type: Std. 5/8" bore, multi-step V-belt  |
| • Depth:                                      | 16.75"        | 21"        | • Construction: steel, hard anodized aluminum on all moving components adjustable brass gibs and precision ground steel-ways. |
| • Weight:                                     | 65 lbs.       | 85 lbs.    |   |
| • Max. bearing run out: 0.0004"               |               |            |   |
| • Dovetails, X-axis: 45°; Y-axis: 90°         |               |            |   |
| <b>Capacity:</b>                              |               |            |   |
| • Working Axis Travel: X=9.5", Y=5.5", Z=6.0" |               |            | • Spindle Specifications:   |
| • Maximum Z-Distance to Table: 9.0"           |               |            | • Maximum Spindle Speed: 7000 RPM   |
| • Z-Axis Swivel: 90°                          |               |            | • Sealed Precision Ball Bearing: O.D.=1.5748, I.D.=0.6692   |
| • Column Rotation: up to 180°                 |               |            | • Spindle Nose: 3/4" -16 (3/4" SAE)   |
| • Spindle Head Rotation: 90°                  |               |            | • Spindle Hole: 0.343"  |
| • 6 Spindle Speeds: 525 to 5200 RPM           |               |            | • Spindle ID taper: 15° (30° included)  |
|   |               |            | • Max. Collet Diameter: 9/32"   |
|   |               |            | • Pulley size: 5/8" bore  |



## AT429SXC MICRO MILLER

The AT429SXC Micro Miller features a .75 horsepower 20,000 RPM Sioux Tools motor. Cutter capacity is 3/4" and the unit will cut steel, aluminum and stainless steel. Spindle size is 1/4"-28 and inlet pipe tap is 1/4" NPT. Air requirements: 90 PSI.

Tease trigger allows slow start up & exhaust porting is through the bottom of the handle. P/N AT429SXC .....

Cutter Size	Cutter Dia.	Skirt Part No.	Skirt Price	Cutter Part No.	Cutter Price
-1	5/16	AT429A-1	.	AT429B-1	.
-2	3/8	AT429A-2	.	AT429B-2	.
-3	7/16	AT429A-3	.	AT429B-3	.
-4	1/2	AT429A-4	.	AT429B-4	.
-5	9/16	AT429A-5	.	AT429B-5	.
-6	5/8	AT429A-6	.	AT429B-6	.
-7	3/4	AT429A-7	.	AT429B-7	.

## NICHOLSON HACKSAW BLADES



Nicholson Bi-Metaloy hacksaw blades last twice as long as high-speed steel and 10 times longer than carbon steel. Can operate 20%-50% faster. Practically unbreakable.

### GENERAL RECOMMENDATIONS FOR BLADE SELECTION

- 14 TOOTH** – For cutting heavy cross section and for soft materials where maximum chip clearance is needed. P/N 12-19514 .....
- 18 TOOTH** – For general shop use, where blade is used on several jobs. P/N 12-19518 .....
- 24 TOOTH** – For cross sections of 1/16" to 1/4", such as pipe, angles, small drill rod. P/N 12-19524 .....
- 32 TOOTH** – For cutting stock up to 1/16" thick, such as 4130 tubing, sheet metal, BX. P/N 12-19532 .....

## PLYWOOD PLANER-SCARFFER ATTACHMENT



The Plywood Planer-Scarffer attachment enables you to make consistent scarf cuts quickly and easily. Easy installation and removal allows your planer to be readily used for scarfing as well as a regular planer. The Planer-Scarffer attachment is easily installed on the Makitan 1900B,

Makitan 1911B and the Porter Cable 9125 planers. The attachment is not limited to these particular models or makes. With the Planer-Scarffer attachment, you can purchase standard size sheets of plywood and then join them together. This saves the extra cost of larger sheets and the shipping charges that would be required. By scarfing 4x8 sheets together, save 60% or more in the price of the plywood and make the cost more bearable. The attachment is mounted on a power-planer and cuts an 8:1 bevel. 2 models are available. One fits a 4-3/8" planer for plywood up to 1/2". The other is designed for a 3-1/4" planer and can be used on plywood up to 3/8". Specify planer type when ordering.

- 3.25" attachment for Porter/Cable 9125 .... P/N 12-20110-1900 .....
- 3.25" attachment for Makita n1900B .... P/N 12-20111-1911 .....

## CRAFTSMAN WOOD TOOL CHEST PLANS



Build this magnificent wood tool chest from our detailed professional plan. It's the kind of chest a craftsman dreams of. Features 10 drawers in the sturdy base, 12 more drawers plus a large top bin in the removable upper section. Overall size is 25"W x 10-5/16"L x 27"H. Ideal for the aircraft builder or aircraft mechanic. Plans only for Wood Tool Chest. P/N 12-18350 .....

## CRAFTSMAN WOOD TOOL CABINET PLANS



Machinist's and woodworkers show your skill. Impress potential customers when they come into your shop, and see such a nice cabinet like this. This cabinet has removable trays for easy access to all hand tools. This cabinet when built by my plans, will have room for all your hand tools. As a bonus it has wheels on it for easy mobility. Size of this unit when completed 32"W x 19"D x 68"H. P/N 12-00978 .....

TO

# TOOL KITS — METAL FORMING TOOLS

## RV BUILDER TOOL KIT



These RV builders tool kits are based on recommendations from the Van's Aircraft Builders Manual as well as on the tools that have been purchased from Aircraft Spruce by RV builders. It is an excellent tool kit for the construction of the RV4, 6, 7, 8, and 10 aircraft. They include an air drill, hand rivet squeezer,

rivet sets and other tools of the highest quality. If you are building a RV-9 order 100 extra 3/32" clecos and 50 extra 1/8" clecos. If you are building a RV-10 kit, order 175 extra 3/32" clecos and 125 extra 1/8" clecos as well as the RV-10 bucking bar. See Chart Below for Components  
 Kit with 2x Rivet Gun.....P/N 12-00890  
 Kit with 3x Rivet Gun.....P/N 12-00899  
 RV-10 Bucking bar.....P/N 12-00903

## BUILDER KIT COMPONENTS COMPLETE KIT

Part No.	Description	Price
12-02004	2X Rivet Gun	
A1006-234X	RETAINER SPRING, BEEHIVE TYPE	
12-00869	AVERY PNEUMATIC AIR TOOL REG.	
12-00816	AIR DRILL (PISTOL TYPE)4500RPM	
12-00872	AVERY AIR TOOL OIL	
12-00177	HAND RIVETING & DIMPLING TOOL	
12-00605	AVERY POLY. DIMPLING MALLET	
12-00320	3" YOKE for Hand Rivet Squeezer	
12-00882	AVERY 6PC SQUEEZER SET	
12-00868	AVERY DELUXE DIMPLE DIE KIT	
12-00613	AVERY POP RIVET DIMPLER 3/32"	
12-00611	AVERY VISE GRIP DIMPLER 3/32"	
12-00888	AVERY #615 BUCKING BAR	
TP-670	BUCKING BAR 1-3/4 LB.	
SM10-4704	STRAIGHT RIVET SET 1/8X 3-1/2	
12-00873	AVERY 1/8" DBL OFFSET RIVET ST	
12-00741	AVERY FLUSH SWIVEL RIVET SET	
12-07100-3	AVERY BACK RIVET SET 4-1/8"L	
12-00609	AVERY FLUTING PLIER	
12-00608	AVERY HAND SEAMER 3-1/2" JAW	
12-10105	CLECO PLIERS	
M-3/32	SHEET HOLDERS M-3/32 KWIK-LOK	
M-1/8	SHEET HOLDERS M-1/8 KWIK-LOK	
M-5/32	SHEET HOLDERS M-5/32 KWIK-LOK	
M-3/16	SHEET HOLDERS M-3/16 KWIK-LOK	
SC-1/2-1/2	1/2" X 1/2" SIDE GRIP CLAMP	
SC-1/2-1	SIDE GRIP CLAMPS P/N SC-1/2-1	
12-00632	AVERY EDGE ROLLING TOOL	
12-00618	AVERY BACK RIVETING PLATE	
12-00876	AVERY CUT/POLISH WHEEL KIT	
12-03900	UNIBIT STEP DRILL # 3	
12-18355	RIVET TAPE 3/4" GREEN	
12-04214	#40 SUPER COBALT DRILL (4PACK)	
12-04217	SUPER COBALT DRILL #30 (3PACK)	
12-14221	SUPER COBALT DRILL #21 (3PACK)	
12-04219	SUPER COBALT DRILL #27 (3PACK)	
12-00886	AVERY #19 COBALT DRILL BIT 2PK	
12-00885	AVERY #12 COBALT DRILL BIT 2PK	
12-00884	AVERY 1/4" COBALT DRILL BIT	
12-05200	DRILL BITS 12" LONG 3/32"	
12-05300	DRILL BITS 12" LONG 1/8"	
12-00867	AVERY 4PC DRILL STOP SET	
12-00883	AVERY 90° ANGLE DRILL KIT	
12-01412	AVERY MICRO-STOP CSNK CAGE	
12-00879	AVERY #40 X 3/8" CSNK CUTTER	
12-00880	AVERY #30 X 3/8 CSNK CUTTER	
12-00881	AVERY #20 X 1/2" CSNK CUTTER	
12-00874	AVERY 3PK PILOT PENS	
1216	STEEL RULES #1216	
12-00631	AVERY SHOP HD RIVET GAUGE SET	
12-00633	AVERY RIVET LENGTH GAUGE	
M-1R	WISS SNIPS # M-1R	
M-2R	WISS SNIPS # M-2R	
12-00622	AVERY SPEED DEBURR-CSINK TOOL	
12-00877	AVERY ROYAL MULTI-BURR TOOL	
12-00629	AVERY DOUBLE EDGE DEBURR TOOL	
12-00875	AVERY SCOTCHBRITE CUT/PLSH WHL	
01-00392	CURVED TOOTH FILE 14" LONG	
12-00870	AVERY 3/32" DRIVE PIN PUNCH	
12-00871	AVERY 1/8" DRIVE PIN PUNCH	
12-00889	AVERY 360DEG SWIVEL POP RVT TL	
13-19205	JEPP ACFT SHT METAL & EA SM	
13-11400	STANDARD AIRCRAFT HANDBOOK	

## KIT BUILDER AIRCRAFT TOOL KIT



Initially designed for the RV3, RV4 and RV6 builders, this kit has proven to be very popular with virtually all aircraft home builders. It contains our most popular rivet hammer and is an excellent tool kit for RV builders. Weight: 40 lbs.

### This 530 piece kit includes:

- 1 TP44 - Hand Seamer
- 1 TP638 - Bucking Bar
- 1 TP1112 - Bucking Bar
- 1 TP116 - Hand Rivet Squeezer
- 1 TP670 - Bucking Bar
- 1 TP162 - Fluting Pliers
- 1 TP216 - Tool Box w/Tote Tray
- 1 TP96 - Rivet Cutter
- 1 TP4264 - Dimple & Die Set
- 1 TP45 - 1/4" Air Drill
- 1 TP647 - Bucking Bar
- 1 TP74 - Cleco Pliers
- 1 TP266 - Deburring Tool
- 1 TP97 - Air Tool Regulator
- 1 TP4263 - Dimple & Die Set
- 1 116A - Squeezer Set mix
- 1 TP61 - Micro Stop Countersink
- 1 TP91 - Flush Rivet Set w/Rubber Guard
- 1 TP89 Straight Rivet Set (5 Pcs. SM10 Series)
- 1 TP83 Standard or TP84 (special order) Rivet Gun (specify)
- 1 TP88- Beehive & Quick Change Retainer Springs
- 1 TP90- 10° Offset Rivet Sets (5 Pcs., SM20 Series)
- 3 TP62 - Countersink Cutter Pilots (1 ea.: TP62-21, TP62-30, TP62-40)
- 500 TP75 - Cleco Fasteners (325 pcs. TP75-3/32 & 175 pcs. TP75-1/8)  
P/N 12-01145.....

## WHEELING MACHINE (BENCH MODEL)



Clearly, this is the most popular of in-home English Wheels. Trick out your custom-built bike or complete hobby projects without breaking the bank. Provides outstanding performance on small jobs like motorcycle tanks, tank covers, seat cowls and aircraft fillets. Versatile use - mount on bench, clamp in vise or use with optional welded stand.

Applications: Ideal for small metal crafting projects such as motorcycle gas tanks, hobby projects and small fillets for aircraft applications.

### Specifications:

- \* Thickness capacity for steel is 16 gage; for aluminum, up to 3/32".
- \* Features can be rolled into the center of a 44" panel.
- \* Can be mounted to a bench, clamped in a vise or used with the optional welded floor stand.
- \* Optional wheels and stand sold separately.
- \* Anvil yoke is adjustable on both sides of the axle support with thumb screws so the anvil wheel can be trued with the upper wheel.

Wheeling Machine.....P/N 12-00571

### ACCESSORIES

- Radius Wheel 5".....P/N 12-02026
- Radius Narrow Wheel 5".....P/N 12-02027
- Radius Narrow Offset Wheel 5".....P/N 12-02028
- Radius Wheel 5" Set of 3.....P/N 12-02029
- Optional Stand for Wheeling Machine.....P/N 12-00575

## WHEELING MACHINE (U-WELD MODEL)



This floor model machine is available in Kit Form. We supply: upper wheel, yoke, anvil wheels, screw lift assembly, kick wheel adjuster, quick release cam, steel casters & instructions. You supply steel tubing for frame.  
P/N 12-00570.....

TO

## BEATER BAG



18" diameter; Double stitched; Can be filled with lead shot or sand.....P/N 12-00574

### Optional Anvil Wheels

- 3.25".....P/N 12-00576
- 5.00".....P/N 12-00577
- 8.50".....P/N 12-00578

# TOOL KITS



## MASTER KIT BUILDERS KIT

The Master Kit Builders Kit (TP176MKB) contains all the tools supplied in the "RV" tool kit plus many more. It is designed to supply all the major, most commonly used tools for the building sheet metal aircraft. These items can be used on RV's, Zenair, Questair and Mustang Aeronautic Kits as well as many, many others. A huge savings can be realized by purchasing

this kit over the individual tool price. Wt. 50 lbs.

### Kit Contains:

- 1 - TP83 or TP84 Rivet Gun (specify)
- 1 - TP89i - Straight Rivet Set (5 pcs., SM10 series)
- 1 - TP90i - 10° Offset Rivet Sets (5 pcs., SM20 series)
- 1 - TP91i - Flush Rivet Set with Rubber Guard
- 1 - TP88 - Beehive & Quick Change Retainer Springs
- 1 - TP97 - Air Tool Regulator
- 1 - TP96 Rivet Cutter
- 1 - TP45 - 3/8" Air Drill
- 1 - TP162 - Fluting Pliers
- 1 - TP61 - Micro Stop Countersink
- 3 - TP62 - Countersink Cutter Pilots (1 ea.: TP62-21, TP62-30, TP62-40)
- 500 - TP75 - Cleco Fasteners (325 pcs. TP75-3/32 & 175 pcs. TP75-1/8)
- 1 - TP74 Cleco Pliers
- 1 - TP44 - Hand Seamer
- 1 - TP266 - Deburring Tool
- 1 - TP638 - Bucking Bar
- 1 - TP647 - Bucking Bar
- 1 - TP670 - Bucking Bar
- 1 - TP1112 - Bucking Bar
- 1 - TP51 - Aviation Snip - Right
- 1 - TP52 - Aviation Snip - Left
- 1 - TP53 - Aviation Snip - Straight
- 1 - TP844 - Hand Blind Riveter
- 1 - TP636-1/8" Pop Dimple Die Set
- 6 - TP49-40 - Drill Bit
- 4 - TP49-30 - Drill Bit
- 2 - TP49-12 - Drill Bit
- 1 - TP49-1/4 - Drill Bit
- 4 - TP145DS - Drill Stops (#40, #30, #12, 1/4)
- 1 - TP312 - Circle Hole Cutter
- 1 - TP116 - Hand Rivet Squeezer
- 1 - TP116A Rivet Sets for TP116 (2 Flush & 4 Universal Head)
- 1 - TP4263-3/32" Dimple Die Set
- 1 - TP4264 - 1/8" Dimple Die Set
- 1 - TP722-Fluting Plier (small Flute)
- 1 - TP260 2 Drawer Tool Box (US902 pneumatic Cleco installation tool is optional, but recommended)

P/N 12-00832 .....



## MASTER AIRCRAFT TOOL KIT

This 121-piece complete Aircraft mechanics Kit is excellent for aircraft restoration, repair and manufacturing. It is ideal for the A & P mechanic, student and homebuilder. Kit comes with everything from sheet metal tools to riveting tools in a two-drawer tool chest. This kit includes the top quality riveting hammer manufactured in the U.S.A. Wt.

48 lbs.

### Kit Contains:

- 1 - TP83 / TP84 3X or 4X Offset Handle Rivet Gun
- 40 - TP75 - Cleco Fasteners (10 ea.: 3/32", 1/8", 5/32" & 3/16")
- 20-TP109M - Wing Nut Fasteners (5 ea.: 3/32", 1/8", 5/32" & 3/16")
- 4 - TP145DSK - Drill Stop Kit (1 ea.: #21, #30, #40 & #10)
- 3 - TP62 - Replaceable Pilots (1 ea.: #21, #30 & #40)
- 3 - TP54 - Threaded Drill Bits (1 ea.: #21, #30 & #40)
- 2 - TP88 - Spring Retainer Set
- 5 - TP89i - Straight Rivet Set Mix
- 5 - TP90i - Offset Rivet Set Mix
- 1 - TP91i - Flush Set with Guard
- 1 - TP638 - Bucking Bar
- 1 - TP1112 - Bucking Bar
- 1 - TP670 - Bucking Bar
- 1 - TP647 - Bucking Bar
- 1 - TP97 - Air Tool Regulator
- 1 - TP51 - Aviation Snip - Left
- 1 - TP52 - Aviation Snip - Right
- 1 - TP52 - Aviation Snip - Right
- 1 - TP53 - Aviation Snip - Straight
- 1 - TP61 - Stop Countersink
- 1 - TP45 - 3/8" Pistol Grip Air Drill
- 1 - TP46 - 90° Angle Attachment
- 1 - TP346 - Heavy Duty Rivet Cutter
- 1 - TP116 - Hand Rivet Squeezer
- 6 - TP116A - Squeezer Set Mix
- 1 - TP74 - Cleco Pliers
- 1 - TPMM250-1 - Strap Duplicator #40
- 1 - TPMM250-2 - Strap Duplicator #30
- 1 - TPMM250-3 - Strap Duplicator #21
- 1 - TPMM250-5 - Strap Duplicator #10
- 1 - TP57 - Cone Jaw Chuck
- 1 - TP162 - Fluting Pliers
- 1 - TP76K - Hand Punch Kit
- 1 - TP44 - Hand Seamer
- 1 - TP81 - Hand Nibbler
- 1 - TP206 - Aircraft Repair Manual
- 1 - TP260 - 2-Drawer Tool Chest
- 5 - TP123SG - Side Grip Fasteners
- 1 - TP70 - Chip Chaser
- 1 - TP675 - Air Vacuum

P/N 12-01126 .....

## US INDUSTRIAL TP83 & TP84 RIVET GUN KIT



This complete kit contains all the basic tools required for most riveting applications. In addition, the tools are well organized in the molded plastic case, making it the perfect kit for the A & P student, mechanic, airline maintenance personnel or homebuilder.

### This 21 piece kit includes:

- 1 TP83(3x) or TP84(4x) rivet gun
  - 1 TP89i straight rivet set.
  - 1 TP90i offset rivet set
  - 1 TP91 flush set with guard
  - 1 TP88 spring retainers (2 pc.)
  - 2X, 3X, 4X and many
  - 1 TP1112 bucking bar
  - 1 TP638 bucking bar
  - 1 TP647 bucking bar
  - 1 TP670 bucking bar
  - 1 TP97 air tool regulator
  - 1 A1142 air tool oil
  - 1 TP216M molded plastic case
- Kit with TP83(3x) Gun ..... P/N 12-02009 .....
- Kit with TP84(4x) Gun ..... P/N 12-02011 .....



## DELUXE STUDENT TOOL KIT

This kit meets most school requirements for basic sheet metal tools. These high quality tools will take the student through school and into the profession for years of outstanding service. It contains the most popular rivet hammer and is a great starter kit. Wt. 14 lbs.

P/N 12-01127 .....

### Kit Contains:

- 1 - TP83 - Rivet Hammer
- 1 - TP2012 - Deluxe Air Tool Regulator
- 1 - A1006-234X - Beehive Spring Retainer
- 1 - A1007-234X - Quick Change Spring Retainer
- 1 - TP89 - 5 Pc. Straight Rivet Set Mix (AN470)
- 1 - TP670 - Bucking Bar
- 1 - TP346 - Rivet Cutter
- 40 - TP74 - Cleco Fasteners (10.: 3/32" 1/8", 5/32", 3/16")
- 1 - TP45 - 3/8" Air Drill
- 6 - TP49 - Drill Bits
- 1 - TP145DSK - 4 Pc. Drill Stop Kit
- 1 - TP61K - Micro Stop Countersink and 3 Cutters
- 1 - TP279 - Military Style Tool Pouch



## GLASTAR TOOL KIT

This kit is designed for all new Glstar kit aircraft. The tools included are recommended by the manufacturer, specifically for the assembly of the sheet metal portion of the kit. Many of these tools are of top quality, and designed to last. They are all covered by a 30 day unconditional money back guarantee.

P/N 12-00831 .....

### Kit Contains:

- 1 - SM10-4706i - 3/16" Universal Rivet Set
- 1 - TP83 - Rivet Gun
- 1 - SM10-4703i - 3/32" Universal Rivet Set
- 1 - SM10-4704i - 1/8" Universal Rivet Set
- 1 - TP91 - Flush Set w/rubber guard
- 1 - A1007-234X - Quick Change Retainer Spring
- 1 - TP61 - Stop Countersink
- 1 ea. - TP62 - 100° Countersink Cutter Pilots (12, 21, 30 & 40)
- 1 ea. - TP62A - 120° Countersink Cutter Pilots (30)
- 1 - TP116 - Hand Rivet Squeezer
- 1 - TP4263SB-1/8" Dimple Die Set
- 1 - TP4264SB - 3/32" Dimple Die Set
- 1 - TP45 - 3/8" Capacity Air Drill
- 250 - TP75 -3/32 - 3/32 Clecos
- 150 - TP75 -1/8 - 1/8 Clecos
- 25 - TP75-3/16 - 3/16 Clecos
- 1 - TP74 - Cleco Plier
- 1 - TP266 - Deburring Tool w blades
- 1 - TP838 90° Countersink/ Deburring Set
- 1 - TP216 - Tool Box
- 1ea. - TP638, TP721, TP760B - Bucking Bars
- 1ea. - TP49-11/64, 1/4, 1/16 - Assorted Jobber Drill Bits
- 1 - TP249 - 60 pcs. - #1-#60 Jobber Drill Bit Set
- 1ea. - TP55-30, 40 - 6" Aircraft Extension Bits
- 1 - TP55A-40-12" Side Grip Clamps
- 2 - TP538STC - Tension Clamp
- 1 - TP51K - Aviation Snip Kit - Left, Right, Straight
- 1 - TP46K - 90° Drill Attachment with Bits #40, #30, #21
- 1 - TP70 - Chip Chaser
- 1 - TP844 - Swivel Hand Riveter
- 1 - TP45588 - Hook Scriber
- 1 - TP294AP - Center Punch
- 1 - BG383-1 - Tape Measure
- 1 - TP604B - 12" Ruler 32nds, 64ths, 10ths, 100ths, Graduations
- 1 - TP297-Spring Divider (Caliper)

## U.S. INDUSTRIAL MUSTANG KIT



This kit is designed especially for the assembly of the Mustang Kit aircraft. It is comprised of over 300 items, specifically required in the fabrication and assembly of this aircraft.

### This 317 piece kit includes:

- 1 TP83(3x) or TP84(4x) Rivet Gun
  - 1 TP91 Flush Rivet Set
  - 1 SM10-4703 Rivet Set
  - 1 SM10-4704 Rivet Set
  - 1 SM10-4705 Rivet Set
  - 1 A1007-234X QC Retainer Spring
  - 1 TP346 Heavy Duty Rivet Cutter
  - 1 TP61K Stop Countersink Kit
  - 1 TP722 Fluting Pliers
  - 130 TP75-1/8 Cleco Fasteners
  - 25 TP75L-1/8 Cleco Fasteners
  - 80 TP75-3/32 Cleco Fasteners
  - 1 TP74 Cleco Pliers
  - 1 TP44 Hand Seamer
  - 1 TP227G Duckbill Pliers
  - 1 TP266 Deburring Tool
  - 1 TP888-3 Hand Rivet Squeezer
  - 1 TP116A Squeezer Sets
  - 1 TP751 Bucking Bar
  - 1 TP670 Bucking Bar
  - 1 SM181 Swivel Flush Rivet Set
  - 5 TP641HC Handi-Clamp
  - 25 TP75L-3/32 3/32 Cleco Fasteners
  - 1 TP81 Hand Nibbler
  - 4 TP49-30 Drill Bits
  - 4 TP49-3/32 Drill Bits
  - 4 TP49-40 Drill Bits
  - 4 TP49-1/8 Drill Bits
  - 2 TP49-12 Drill Bits
  - 2 TP49-3/16 Drill Bits
  - 1 TP45611 Unibit Drill
  - 1 TP294HD Auto Center Punch
  - 1 TP735K Hand Pack Trial Kit
  - 1 TPF56 Flat File
  - 1 TP4263 Dimple and Die Set
  - 1 TP4264 Dimple and Die Set
  - 1 TP216 Tool Box
- Kit w/ TP83 gun (3x)..... P/N 12-00347 .....
- Kit w/ TP84 gun (4x)..... P/N 12-00498 .....

# RIVETING HAMMERS

## RIVETING HAMMERS



US 3X

These high quality riveting hammers are excellent for all light aircraft metal riveting applications. They feature a convenient offset handle (except Model US3AA which is straight handle) and come complete with retainer spring and regulator. All models feature metered teasing trigger, made in U.S.A.

Part No.	Blows / Min.	Capacity Alum.	Bore	Stroke	Length	Weight (Lbs.)	Price
US1X	3600	1/8"	9/16"	1-1/2"	5-11/16"	2	.
US2X	2580	1/8"	1/2"	2-1/4"	6-11/16"	2-1/4	.
US3X	2160	3/16"	1/2"	2-7/8"	7-5/16"	2-5/16	.
US5X	1560	1/4"	3/4"	2-11/16"	6-11/16"	4-3/4	.
US7X	900	3/8"	3/4"	5-13/16"	8-5/16"	6	.

## "RECOILLESS" RIVETING HAMMERS



US 3R

In the early stages of developing a truly recoilless/fatigueless riveting hammer, it was determined that the tools must meet certain goals. The main goal being a reduction in low-frequency vibration in accordance with ISO Standard #5349-1986. In this standard are guidelines for the measurement and

assessment of human exposure to hand-transmitted vibration. As a result, the following has been achieved: •Ergonomic design: To maximize user comfort by achieving a relaxing, comfortable, lightweight and balanced tool •Compact tool size: Since aircraft riveting is never standard, a tool that will allow the best overall access • Retain user touch: A metered trigger which provides single or multiple blows per minute while maintaining the ability to set rivets in seconds • Further dampen noise output. • Least amount of parts: No similar tool is produced with fewer parts, thus enhancing reliability, but keeping it simple enough so that maintenance can be done by anyone. Independent testing\* has shown these tools will greatly lessen job-related effects of prolonged exposure to vibration & boost user productivity.

### SPECIFICATIONS

Part No.	Capacity		Bore	Stroke	Blows per minute
	Alum.	Steel			
US3R	3/16"	5/32"	1/2"	3"	1900
US5R	1/4"	3/16"	1/2"	5"	1400

Part No.	Rivet Set dia.	Overall Length	Weight	Air Inlet	Price
US3R	.401	7-7/8"	3 Lbs.	1/4 NPT	.
US5R	.401	9-7/8"	3.5 Lbs.	1/4 NPT	.

## PNEUMATIC RIVET SQUEEZER



Heavy duty industrial tools are manufactured to exacting standards to insure long service life. All critical parts, including the yoke, are fabricated from 4130 steel and heat treated to Rc 42-46. These rivet squeezers have earned a reputation for durability and reliability through years of service on the production lines of major airframe manufacturers such as Grumman, Piper, Beech and Cessna. Easily operated by one hand. All replacement parts and other yoke designs available. Features feathering throttle.

SPECIFICATION	MODEL	
	3000	6000
Max. Force	3000	6000
Rivet Capacity Dural	3/16"	3/16"
Steel	5/32"	5/32"
Standard Yoke Reach	2"	2"
Air Hose Size	1/4"	1/4"
Set Travel	9/16"	9/16"
Recommended Line Pressure	90PSI	90PSI
Weight	6 LBS.	6 LBS.

3000..... P/N 12-03400.....  
6000..... P/N 12-03500.....

## AIRCRAFT RIVET GUNS



2X

The standard tool used in aircraft manufacturing plants such as Boeing, Rockwell, Lockheed etc., is completely interchangeable with Chicago Pneumatic. These tools are slow hitting with excellent finger tip control. Accepts all .401 shank rivet sets and attachments. All guns are brand new and carry a full 1 year warranty.

Part No.	Blows / Min.	Capacity Alum.	Bore	Stroke	Weight (Lbs.)	Price
2X	2580	1/8"	1/2"	2-1/4"	2.7	.
3X	2160	3/16"	1/2"	2-7/8"	3.4	.
4X	1740	1/4"	1/2"	3-1/16"	3.6	.

## TP82, TP83, AND TP84 RIVET GUNS



This "X" type feathering trigger riveter is the only rivet gun that allows you to slowly begin riveting without damage to the skin. This is critical in performing riveting operations. This gun is used by aircraft mechanics worldwide. It's also the perfect tool for kit builders.

**NOTE:** Long term exposure to low frequency vibration caused by riveting may be harmful to your hands and arms. We suggest you take frequent breaks when riveting to reduce this exposure. Features: \* Takes .401 shank rivet sets \* Lightweight aluminum handle \* Price includes spring retainer & regulator (TP97) \* Precision machined hardened and ground valve \* "Sure Grip" powder coated finish \* Teasing trigger \* Precision machined and hardened cylinder for long life. • Made in the U.S.A.

2X Rivet Gun (1/8" Capacity)..... P/N 12-02002.....  
3X Rivet Gun (3/16" Capacity)..... P/N 12-02003.....  
4X Rivet Gun (1/4" Capacity)..... P/N 12-02008.....

## AT590RGK 3X RIVET GUN KIT



This kit provides all the essentials for straight and offset riveting. Four of the most commonly used bucking bars; eight cupped sets for 3/32", 1/8", 3/16" AN470 universal head rivets; 3 flush sets for AN426 rivets; 2 retainer springs; an air regulator for adjusting hammer blows; tool oil; an attractive molded rubber case for organization and storage; and a 3X rivet gun. Ideal for structural and sheet-metal technicians, home builders, & students. P/N 12-00240.....

## SPECIAL DIMPLING & RIVET SET FOR RV4, RV6, RV8 AIRCRAFT



This 21-piece dimpling and riveting set was designed especially for use in the construction of the Vans RV aircraft series, and is ideal for a variety of other aircraft as well. All the riveting sets and dimple dies are made from heat treated stainless steel.

\* Dimple dies size stainless steel – rivet set are steel. All are heat treated.

**Special RV Dimpling and Riveting Kit includes:** Set holder block, Cup sets, Flat sets, and Spring back dimple dies.

**Dimple Dies** –3/32", 1/8", 5/32" rivet size. 6-32, 8-32, 10-32 screw sizes. **Cup Sets** – 3/32", 1/8", 5/32".

**Flat Sets** – 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 1/2". Polyethylene set. 21-piece kit ..... P/N 12-00450 .....

## 7-PC RIVET SET



Holder includes 3/32", 1/8", 5/32 and 3/16 cups for AN470 rivets, plus 3 flat sets for AN426 rivets. To be used with pneumatic or hand rivet squeezer. P/N 12-00555.....

## 6-PC DIMPLE DIE SET

### RIVET SIZE



Holder includes springback dimple dies for 3/32", 1/8" and 5/32" rivets. To be used with pneumatic or hand rivet squeezer. P/N 12-00560.....

## 6-PC DIMPLE DIE SET

### SCREW SIZE



Holder includes springback dimple dies for 6-32, 8-32 and 10-32 screw sizes. To be used with pneumatic or hand rivet squeezer. P/N 12-00565.....

TO

# RIVET SETS FOR RIVETING HAMMERS



## RIVET SETS STRAIGHT .401 SHANK (AN470)

Length "L"	Part Numbers					Price
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	
3-1/2"	SM10-4703	SM10-4704	SM10-4705	SM10-4706	SM10-4708	.
5-1/2"	SM11-4703	SM11-4704	SM11-4705	SM11-4706	SM11-4708	.
7-1/2"	SM12-4703	SM12-4704	SM12-4705	SM12-4706	SM12-4708	.
10-1/2"	SM13-4703	SM13-4704	SM13-4705	SM13-4706	SM13-4708	.



## RIVET SETS STRAIGHT .498 SHANK (AN470)

Length "L"	Part Numbers					Price
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	
3-1/2"	SM30-4703	SM30-4704	SM30-4705	SM30-4706	SM30-4708	.
5-1/2"	SM31-4703	SM31-4704	SM31-4705	SM31-4706	SM31-4708	.
7-1/2"	SM32-4703	SM32-4704	SM32-4705	SM32-4706	SM32-4708	.



## FLUSH SETS STRAIGHT .401 SHANK (AN470)

Dia.	Length	P/N	Price	Dia.	Length	P/N	Price
1"	2-1/2"	SM90	.	1-1/2"	5-1/2"	SM95	.
1"	3"	SM91	.	1-1/2"	3-1/8"	SM96	.
1"	5-1/2"	SM92	.	1-3/4"	3-1/4"	SM97	.
1"	7-1/2"	SM93	.	1-1/8"	2-1/4"	SM98	.
1-1/4"	3"	SM94	.	1-1/4"	2-1/4"	SM99	.

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.



## FLUSH SETS STRAIGHT .498 SHANK (AN470)

Dia.	Length	P/N	Price	Dia.	Length	P/N	Price
1"	2-1/2"	SM100	.	1-1/2"	3-1/8"	SM106	.
1"	3"	SM101	.	1-3/4"	3-1/4"	SM107	.
1"	5-1/2"	SM102	.	1-1/8"	2-1/4"	SM108	.
1"	7-1/2"	SM103	.	1-1/4"	2-1/4"	SM109	.

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.

## SETS FOR HIGH SHEAR RIVETS .401 SHANK



Length on all is 3-1/2"

Rivet Size	Part No.	Price
1/8"	SMHS10-4	.
5/32"	SMHS10-5	.
3/16"	SMHS10-6	.
1/4"	SMHS10-8	.



## RIVET SETS OFFSET .401 SHANK (AN470)

Length "L"	Part Numbers					Price
	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	
3-1/2"	SM20-4703	SM20-4704	SM20-4705	SM20-4706	SM20-4708	.
5-1/2"	SM21-4703	SM21-4704	SM21-4705	SM21-4706	SM21-4708	.
7-1/2"	SM22-4703	SM22-4704	SM22-4705	SM22-4706	SM22-4708	.
10-1/2"	SM23-4703	SM23-4704	SM23-4705	SM23-4706	SM23-4708	.

## FLUSH SETS OFFSET .401 SHANK (AN470)



DIA	Length	P/N	Price
1"	3-1/2"	SM140	.
1"	7-1/2"	SM142	.
1"	5-1/2"	SM141	.

NOTE: These flush sets are universal for any diameter rivet. Order by part number referencing the length and diameter of the flush set required.

## BUCKING BLOCKS

Designed to be used with a riveting gun or by striking with a hammer. For aid with dimpling and/or riveting applications. Acts as a holding fixture for .187 shank dimple dies or rivet sets. Weight: 4 lbs. P/N 12-00805.....



## SWIVEL DIMPLING TOOL .401 SHANK

\*Can be used with TP93 Bucking Block

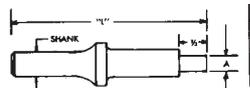
\*\*\*Example: To order L = 3-1/2 - 1/8" Rivet specify: SM10SP-4264

Model #	"L"	Type	Price
SM10SP***	3-1/2"	Punch	.
SM10SD	3-1/2"	Die	.

Cupings	3/32	1/8	5/32	3/16
For 100° Rivets (AN426)	4263	4264	4265	4266



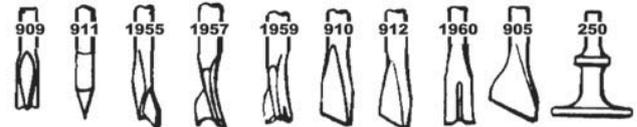
## KNOCKOUT PUNCHES FOR HIGH SHEAR RIVETS .401 SHANK



Length on all is 3-3/8".

Rivet Size	Part No.	Price
1/8"	SMHS401K-4	.
5/32"	SMHS401K-5	.
3/16"	SMHS401K-6	.
1/4"	SMHS401K-8	.

## .401 SHANK RIVETING HAMMER ACCESSORIES



Description	P/N	Price	Description	P/N	Price
Twin Blade Cutter	909	.	Chisel	910	.
Moil Point	911	.	Rivet Buster	912	.
Body Ripper	1955	.	Spotweld Breaker	1960	.
Panel Cutter	1957	.	Scraper	905	.
Metal Trimmer	1959	.	Flush Set	SM97	.



## RETAINER SPRINGS

Retainer springs comes in two styles: Quick Change Type: Designed to make possible speedy changing of rivet set in rivet gun. Beehive Type: Designed as a fixed type to securely hold rivet set in rivet gun.

Rivet Hammer Model #	Beehive Type		Quick Change Type	
	Part No.	Price ea.	Part No.	Price ea.
1X-2X-3X-4X	A1006-234X	.	A1007-234X	.
5X-7X-9X	A1006-579X	.	A1007-100B	.
E3-E5	A1006-234X	.	A1007-234X	.
100B-200B				
AVC12-AVC13	A1006-AVC	.		
3R-5R	A1006-234X	.		



## RIVET SET HOLDER

This "no mar" rivet set holder was developed by an RV-7 builder who needed to drive rivets in tight spaces without scratching the surrounding metal, such as happens when using standard metal spring type set holders. Just attach the holder to a recessed (mushroom) rivet set, backside rivet sets, or any other rivet too set. A small slit in the half inch hole allows the set holder to stretch over the shoulder of the recessed and backside tools. P/N 12-01391 .....

## BACK RIVETING RIVET SET



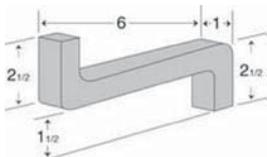
For back riveting flush rivets on RV control surfaces and other home-buils. Has a plastic Delrin sleeve with spring to hold multiple sheets of aluminum together while riveting. 0.401 shank x 4-1/8 inches long.

Back Rivet Set 3-1/2" long ..... P/N 12-07100-3..... ea.

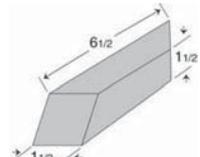
TO

# BUCKING BARS

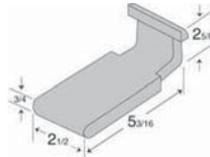
Our bucking bars are cast with ductile iron to insure non-porous finish which is very important in order to have a highly polished finished surface. They are heat treated to 38-42 RC and therefore can be repolished many times without changing hardness. This wide selection of sizes, shapes, and weights enables the aircraft builder to pick the proper bar for his job. Made in the U.S.A.



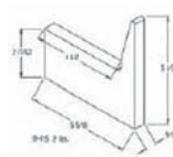
12-01302 2-3/4 Lbs.



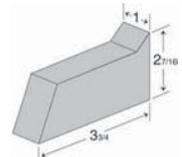
12-01303 3 Lbs.



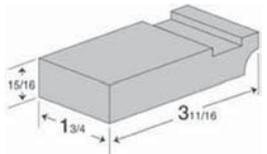
12-01305 3 Lbs.



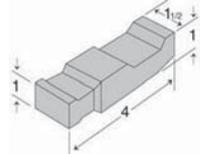
12-01306 2 Lbs.



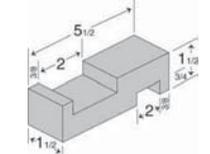
12-01307 1-3/4 Lbs.



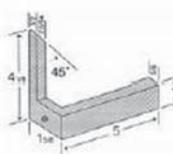
12-01308 1-1/2 Lbs



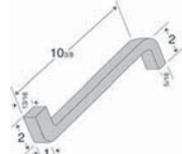
12-01309 1-1/4 Lbs.



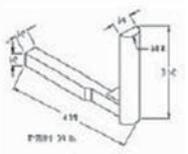
12-01310 2-3/8 Lbs.



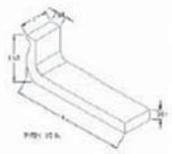
12-01311 1-1/4 Lbs.



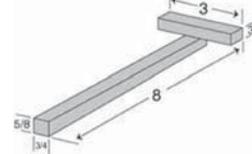
12-01312 3-5/16 Lbs.



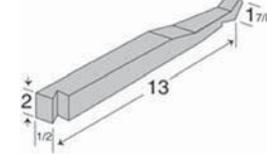
12-01313 1-1/4 Lbs.



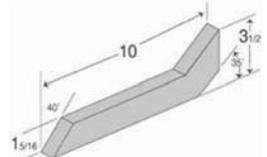
12-01314 1/2 Lbs.



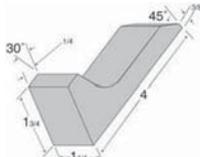
12-01315 1-1/2 Lbs.



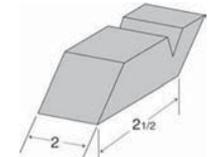
TP-683 3-1/4 Lbs.



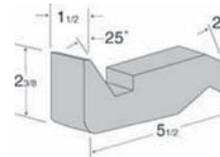
12-01319 1-3/4 Lbs.



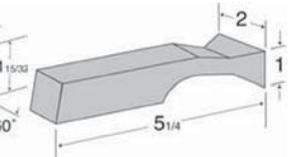
12-01320 2-1/2 Lbs.



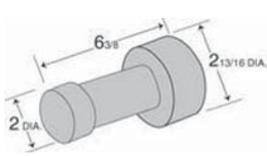
12-01280 1-3/8 Lbs.



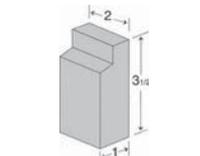
12-01281 3 Lbs.



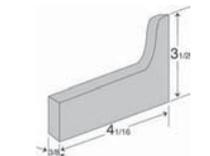
12-01282 1-3/8 Lbs.



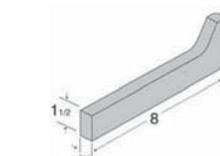
12-01284 6 Lbs.



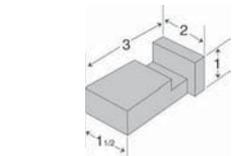
12-01285 2-1/2 Lbs.



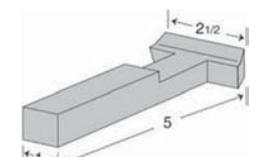
12-01286 3/4 Lb.



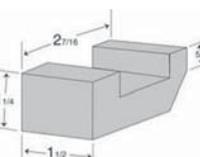
12-01287 2-3/4 Lbs.



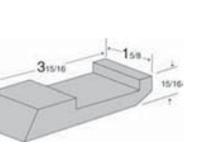
12-01288 1-1/4 Lbs.



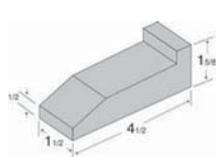
12-01289 1-1/4 Lbs.



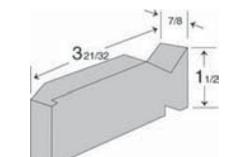
12-01290 1 Lb.



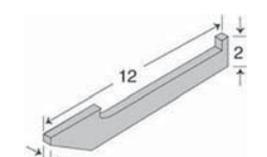
12-01291 1-1/4 Lbs.



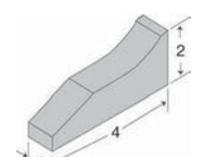
12-01292 2 Lbs.



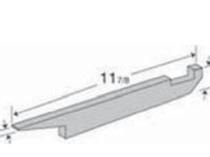
12-01293 1-1/4 Lbs.



12-00828 2-1/4 Lbs.



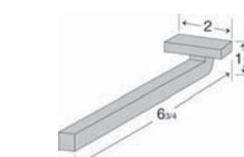
12-00841 1-1/2 Lbs.



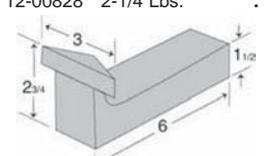
12-01294 2 Lbs.



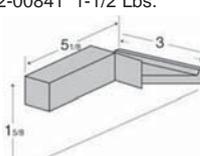
AT-618 2-1/4 Lbs.



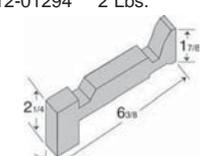
12-01295 1 Lb.



12-01296 4-1/4 Lbs.



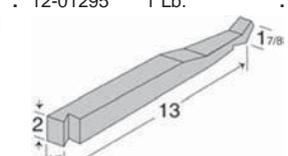
12-01297 1-3/8 Lbs.



12-01298 1-3/4 Lbs.



12-01299 2-1/4 Lbs.



12-01301 3-1/4 Lbs.

TO

# RIVET TOOLS – SHEARS

## RIVET REMOVAL TOOL

This quality tool enables the user to quickly and accurately remove rivets and blind fasteners. The tool comes complete with drill bits and guides, #40, #30, #21, and #10. Made in U.S.A.



P/N 12-00817 .....

### REPLACEMENT BITS

P/N 12-01128 ..... P/N 12-01130.....  
P/N 12-01129 ..... P/N 12-01131.....

## HAND RIVETING & DIMPLING TOOL

Used for hand dimpling of skins and small parts and for hand riveting of parts, assemblies, and spars. This tool maintains alignment of the dies to each other, and insures proper alignment to the work surface for superior dimpling results over either rivet gun or free-hand dimpling methods.



Features include: • 22" deep x 4" tall throat • Heavy wall 1" x 2" steel tube arm • Heavy wall aluminum channel base • Bronze 1/2" I.D. guide bushings for shafts • Heat treated and

centerless ground stainless steel driver shaft (2)– one shaft has flat end for riveting with rivet gun & one shaft accepts 0.187" shanks for dimple dies & sets. • 1.5" extension shaft for dies • Adjustable die holder block. Rivet Tool Return Spring Kit now included (Spring, collar and wrench). Great for one handed dimpling of skins and parts. Uses rivet, dimple and die sets with .187" shank. (Dies and sets sold separately)

P/N 12-00177 .....

## DRDT-2 RIVET DIMPLER

DRDT-2 (AKA Dash 2) is a welded steel c-frame rivet dimpler. Replaces the common impact c-frame rivet dimplers of the past. With its ample mechanical advantage, dimpling is fast, easy, less fatiguing and safe on the skins. With a fully adjustable set holder you can achieve consistent and accurate dimples. The DRDT-2 incorporates a new low force spring return system that prevents skin damage from the

accidental release of the handle without increasing the force required to dimple. 22" throat depth allows dimpling of up to 44" wide sheets. The relief under the lower frame member provides dimpling access to spars, ribs, leading edge skins. Designed and analyzed using state of the art engineering tools the DRDT-2 can handle all your dimpling needs on your project. The DRDT-2 is painted with an industrial powder coat giving one of the toughest finishes available. Features: • Weight: 60 lbs • Size: 28"X16"X3" • Capacity: Up to 22" depth • Gap: 4" • Skin thickness: Up to 0.040" Aluminum. Dimple Dies: 3/16" shank Diameter.

P/N 12-00907 .....

## AIRCRAFT BUILDER CALIPERS

Our Aircraft Builder's Calipers feature an easy-to-read dial, 6" length capacity, and measurement in 4 dimensions outer, inner, depth, and step. The dial has .001" graduations for case and bullet measurements.



A chart that shows maximum and trim lengths for all popular calipers, plus a fitted case with instructions, are included. Ideal measurement tool for aircraft mechanics and homebuilders. Available in plastic or stainless steel.

Plastic Calipers .....P/N 12-30215 .....

Stainless Steel Calipers .....P/N 12-30220 .....

## DIGITAL FRACTION CALIPERS

The Digital Fractional Caliper brings you three universal systems of measurement, making it an equally practical choice for both



professional and do-it-yourself projects. The high-contrast digital display easily switches between inches, millimeters and fractions, with guaranteed accuracy to 0.001". In addition, the rugged stainless steel design delivers accurate readings of inside, outside, step and depth measurements. The Fraction+ comes with a foam padded plastic case for safe storage when not in use.

Features \* Stainless Steel Caliper. \* Tri-Mode digital display – inches, millimeters, and fractions. \* For making inside, outside, depth and step measurements. \* Resolution 0.0005" (0.01mm). \* Accuracy 0.001" (0.02mm). \* Auto on/off feature preserves battery life. \* Bar scale is graduated in inches and millimeters. \* Free-wheeling friction roller advances and retracts slide. \* Extendable depth gage for use in slots and small holes. \* Etched and filled black graduations. \* Convenient foam-padded case for storage.

Digital Fraction Caliper - 6" .....P/N 12-02012 .....

Digital Fraction Caliper - 8" .....P/N 12-02013 .....

Digital Fraction Caliper - 12" .....P/N 12-02014 .....

## RIVET SHANK REMOVAL PLIERS

Tired of battling those rivet shanks stuck in the ribs and under other underlying structures after you have drilled the heads off and removed the skin? The Rivet Shank Removal Pliers will make short work of this unpleasant task and turn a two man job into a one man



job. A handy, patented tool which will reduce labor time and costs.

P/N 12-00745 .....

## POWER SHEAR

This air-powered shear cuts straight lines or curves up to 180 inches/minute. An ideal shear for any aircraft builder. Cuts up to 18 gauge mild steel. Width of cut: 7/32". Length: 8-1/4". Wt. 2.14 Lbs.



P/N 12-01330 .....

## ROUTER

This air-powered router is very light weight and features a straight handle and rear exhaust. Base is 1-1/2" and router guide is included. RPM: 20,000. Router shank: 1/4". Length: 6". Wt.: 1-1/2.12 Lbs. Made in U.S.A.



P/N 12-01321 .....

## CHIP CHASER

This handy, economical tool removes chips and burrs on metal between sheets after rivet holes



have been drilled. A recommended tool for any aircraft builder involved with sheet metal work.

P/N 12-01304 .....

## WISS ANGLE SNIPS

The new M8R and M9R compound action snips possess the same outstanding durability as all the other products in the wide Wiss® compound action line, but feature a right-angle blade that allow greater reach in overhead and other awkward applications.



And like every other Wiss compound action snip, both the M8R and M9R have a unique blade edge, shaped to allow the material to set deeper and serrated to hold it tight during the cut.

**M8R** - Compound action right angle blade cuts straight to left

P/N 12-02007 .....

**M9R** - Compound action right angle blade cuts straight to right.

P/N 12-02006 .....

## BUCKING BAR KIT



This starter kit contains the most commonly used bucking bars. Multi-finished surfaces for numerous applications. Heat treated for durability.

- 1 AT638 Bucking Bar
- 1 AT681 Bucking Bar
- 1 AT647 Bucking Bar
- 1 AT670 Bucking Bar

P/N 12-00840.....

## AIR DRILLS (PISTOL TYPE)

These air powered pistol drills feature ergonomic design and use .90 H.P. motors. Sound level is a low 84 db while production output remains high with these high quality drills. Made in U.S.A.



Part No.	RPM	Capacity	Length	Weight	Price
12-00816	4,500	1/4"	5-3/8"	2 lbs	.
12-00815	2,800	1/4"	5-3/8"	2 lbs.	.
12-00813	500	3/8"	7-1/2"	2.13 lbs.	.

TO

# SHEET METAL TOOLS



## MARVEL AIR TOOL OIL

MARVEL brand oil - especially engineered for care of piston-type and rotary air tools. Prevents rust formation while providing lubrication for longer tool life and smoother operation. Keeps your air tools in top shape. A "must" for all air tools. 4 oz. bottle with spout.

P/N 12-00872 .....

## TRUE BLUE CONCENTRATED CUTTING FLUID

Water Soluble and environmentally safe. Completely freeze tolerant. Mixes 8 to 1 for economical use. Rust inhibiting properties. Wipes clean and leaves surfaces ready to paint. Size: Quart

P/N 12-01852.....



## MICRO-STOP COUNTERSINK CAGES & NYLON FOOT PIECE

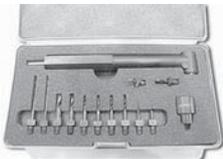
2 Models available-one with NEEDLE bearing and one with BRONZE bushings. .001" increment depth adjustment. Positive adjustment lock. 1/4" dia. shank. 9/32" shaft travel. 9/16" cutter capacity. For 1/4-28 threaded cutters. Comes with "NO-MAR" foot piece. Rated at 3,000 RPM. Made in USA.

With Bronze Bushings ..... P/N 12-01412 .....  
With Needle Bearings..... P/N 12-00940.....

## SQUEEZER SET MIX

6 piece set of the most commonly used squeezer sets shown above: 3/32" & 1/8" cup sets; 1/8" modified cup set; 1/8" & 1/4" flush sets; & 1/16" by 3/8" dia. flush set; plus #4510 organizer block.

P/N 12-00882.....



## 90° ANGLE DRILL KIT

This angle drill kit includes a drill attachment with quality ball bearing construction for long life. Kit includes 12 threaded drills in assorted sizes and lengths, a mini 3-jaw chuck with 1/16" to 1/4" diameter capacity, and a molded storage case. Made in the U.S.A.

**Drill Sizes:** 1 ea. #2140 #40 stubby 1 ea. #2130 #30 stubby  
2 ea. #3140 #40 short 2 ea. #3130 #30 short  
1 ea. #3127 #27 short 1 ea. #3121 #21 short  
1 ea. #3112 #12 short 1 ea. #3114 #1/4" short  
1 ea. #4140 #40 long 1 ea. #4130 #30 long  
1 ea. #20379 Mini 3-jaw chuck  
P/N 12-00883.....

## STOP COUNTERSINK CUTTERS - 100°

• Made in the U.S.A. • High Speed Steel • 1/4" -28 Threaded Shanks • 100° 3-Flute Precision Ground •For Use in Micro-Stop Countersink Units • 8 Sizes Available



Pilot Size	Decimal Equiv.	Body Dia.	Part No.	Price
#40 (3/32" rivet)	.0980"	3/8"	12-00879	.
#40 (3/32" rivet)	.0980"	1/2"	12-00942	.
#30 (1/8" rivet)	.1285"	3/8"	12-00880	.
#27 (#6 screw)	.1440"	1/2"	12-00943	.
#20 (#8 screw)	.1610"	1/2"	12-00881	.
#12 (#10 screw)	.1890"	1/2"	12-00944	.
5/32" (5/32" rivet)	.1560"	1/2"	12-00945	.
3/16" (3/16" rivet)	.1875"	1/2"	12-00946	.
1/4" (1/4" rivet)	.2500"	1/2"	12-00947	.

## 360° SWIVEL HAND POP RIVET TOOL

Stanley brand professional hand pop rivet tool. Unique head design swivels 360° for riveting in any position, at any angle. Extended nose for hard to reach places. Built in handle latch. Die-Cast aluminum & hardened steel construction. Molded grips. Includes (4) interchangeable steel nose-pieces for: 3/32", 1/8", 5/32", & 3/16"



P/N 12-00889 .....



## DELUXE DIMPLE DIE KIT W/BLOCK

This deluxe dimple die kit has all the most commonly used dimple dies in one package--at a special price. This kit includes:

1- 3/32 Dimple Die Set 1- #14870 Female Die / 3/8" Dia.  
1- 1/8 Dimple Die Set 1- #14871 1/8" Female Die / 3/8" Dia.  
1- #6 Screw Dimple Die Set 1- #8 Screw Dimple Die Set  
1- #4520 Organizer Block for Dies  
P/N 12-00868 .....

## DOUBLE OFFSET RIVET SET



SET OF 4 RIVET SETS - 5-1/2" long sets. Used for hard to reach rivets in corners. High alloy steel and heat treated. Shanks

are precision ground. Cuppings are polished.

3/32" Double Offset Rivet Set ..... P/N 12-00936 .....  
AVERY 1/8" Dbl. Offset Rivet Set ..... P/N 12-00873 .....  
5/32" Double Offset Rivet Set ..... P/N 12-00937 .....  
3/16" Double Offset Rivet Set ..... P/N 12-00938 .....  
4-PC Double Offset Rivet Set ..... P/N 12-00939 .....



## AVREY CUTTING & POLISHING WHEEL KIT

Avery cutting polishing wheels are a uniform blend of minerals and resins molded into wheel form with rugged, dense construction that provides aggressive polishing and blending action without removing excess base materials.

These wheels generate uniform finishes and can remove minor surface imperfections. Use these wheels with a die grinder for deburring holes and edges. Small wheels are more versatile than large (6") wheels. Can be used on hand held parts or parts in the jig. These wheels are the same density, grade, and mineral type as the 7A MED 6" wheel.

Kit Contents: (1) #936 Mandrel + (2) 1" x 1" x 3/16" Wheels (1) #932 Mandrel + (2) 2" x 3/4" x 1/4" Wheels ..... P/N 12-00876 .....  
1" x 1" x 3/16" Hole Wheel ..... P/N 12-01997 .....  
Mandrel for 3700 ..... P/N 12-01996 .....  
2" x 3/4" x 1/4" Hole Wheel ..... P/N 12-01999 .....  
Mandrel for 3719 ..... P/N 12-01998 .....

## 3M™ SCOTCH-BRITE™ DEBURRING WHEEL

**Two Styles Available:** Cut & Polish/Unitized Wheel-7A Medium grade (harder) Use to radius and deburr edges of aluminum parts. These wheels give a uniform brushed satin finish to parts and deburr quicker and easier than hand finishing. These wheels are discs of Scotch-Brite web compressed and bonded to form a rugged, dense wheel. Wheel size: 6" dia. x 1" wide x 1/2" thru hole. .... P/N 12-00875 .....

**Light Deburring Wheel-7S Fine Grade (Softer)**  
Light deburring 7S Fin 6 x 1 x 1. This wheel has a 1" thru hole. To fit 1/2" order P/N 12-01585..... P/N 12-00948 .....

**3M Flange Adapter 3 45035 1/2"**..... P/N 12-01585 .....

**FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352**



## DRIVE PIN PUNCHES

Drive Pin Punch 1/16" ..... P/N 12-00949.....  
Drive Pin Punch 3/32" ..... P/N 12-00870.....  
Drive Pin Punch 1/8" ..... P/N 12-00871.....



## 4-PIECE DRILL STOP SET

Use when drilling in sheet metal to help eliminate drill breakage & surface marks. Safely keeps drill from going too far through the work. Drill stops have a coiled spring to cushion the drill breakthrough & prevents the drill chuck from marring the work surface. Color coded for easy identification.

P/N 12-00867 .....

TO

# SHEET METAL TOOLS

## POLYETHYLENE DIMPLING Mallet



This custom made UHMW polyethylene plastic mallet is great for dimpling skins. Blows are more solid and much quieter than with steel hammers. Will outlast wood mallets. Hammer head measures 2.5" round x 4" long with 12" handle. Wt: 16oz. P/N 12-00605.....

## PLASTIC FORMING Mallet



This custom made UHMW polyethylene plastic forming mallet is great for metal forming. Smooth radiused surfaces will not mar surface. Long life, split resistant. Mallet head measures 2.5" round X 5" long w/ 11" handle; Wt: 14 oz. Great combo to the shot bag. P/N 12-00607.....

## METAL FORMING SHOT BAG



For those builders that want to try their hand at metal forming this leather shot bag is a must have item. Leather shot bag made from 3/4 oz. top grain cowhide. The bag is double stitched and fills through a 1" opening sealed with Velcro. The bag is 12" round and 1-1/2" thick. Use lead shot #8 - #7.5; or sand - mortar quality type (shot can be purchased at local sporting goods or gun stores). P/N 12-00606.....

## HAND SEAMER/3.5" JAW



Has VISE GRIP locking feature to aid clamping & holding work. Use for straightening and bending rib and bulkhead flanges. Made with 7" vise grip plier. Jaws are made from 3/16" X 1" X 3-1/2" stainless steel with machined radius. TIG welded & polished. P/N 12-00608.....

## FLUTING PLIER



Make narrow & precise flutes for straightening ribs and bulkheads easier & better than pliers with molded jaws. Made with 7" VISE GRIP pliers. Pins are 3/16" dia. stainless steel. TIG welded & polished. P/N 12-00609.....

## VISE GRIP DIMPLERS



Made for dimpling in restricted and hard to reach places where regular dimple dies won't fit. Made with 7" VISE GRIP plier. Machined tool steel dimple dies are T.I.G. welded to the VISE GRIP jaws then polished. 2 sizes available (3/32" and 1/8")..... P/N 12-00611..... 1/8".....P/N 12-00612.....

## LEVER SNIPS



Offset cutting tool, leaves 2 clean, finished edges. 8.5" length, .75 lb.

Model TP133 - (Right hand snip, cuts left & straight)..... P/N 12-00366..... Model TP134 - (Left hand snip, cuts left & straight) P/N 12-00367.....

## ROBIN OFFSET HEAVY DUTY SNIP



This offset blade design allows the sheet to pass under your hand. The steel forged blades keep metal from stretching and causing puckering marks along the cut edge. 16 gauge mild steel capacity. 1.63 lbs. Model TP299.....P/N 12-00369.....

## ADJUSTABLE SET HOLDER FOR PNEUMATIC SQUEEZERS



New improved design. Heat treated 4130 steel investment casting with rolled threads. This special set holder is made to replace the rigid (2-9/16") set holder standard to most CP214 style pneumatic squeezers. This adjustable set holder will eliminate the need to shim the dies and sets with shim washers. Adjustments are faster & easier. P/N 12-00615.....

**Note: Only for yokes with 1" thick base or less. Will not work in tandem units.**

## POP GRIP DIMPLERS AN-426 RIVETS



For dimpling in hard to reach places. Works with any hand pop rivet tool. Can be used over & over. Works for both 100 & 120 pop rivets. Extra nails included (Uses standard hardware store nails). 2 sizes available. 3/32".....P/N 12-00613..... 1/8".....P/N 12-00614.....

**Note: The pop rivet dimplers show above are made with 100° angles, same as regular dimple dies. They will work with either solid flush rivets (AN-426 - 100°) or with pull type rivets such as a AVEV rivets (120°), etc. The dimple formed with these pop rivet dies will not be as 'sharp' as dimples formed with regular dimple dies. This is because you get more pressure with a squeezer or a hammer than with a pop rivet puller; however, the dimples formed with pop rivet dimplers are adequate for occasional use in tight or hard-to-use places.**

## FLUSH SWIVEL RIVET SET



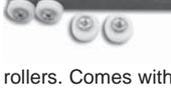
U.S. MADE -- ATI Brand. New design flush rivet set with swivel action eliminates problem of rivet gun alignment with the work surface + rubber guard to reduce slippage while flush riveting. .401" shank X 1-1/4" dia. polished face. Built-in retaining spring. P/N 12-00741.....

## BACK RIVETING PLATE



Back riveting requires a hard flat surface to act as a bucking bar while you set the shop head of the rivet. Our plate is a perfect hard & flat surface for "Back Riveting". 3/8" thick X 4" wide X 15" long. Low carbon steel plate with flat ground surface. Weight 10 lbs. P/N 12-00618.....

## HOLE FLANGING TOOL



For forming flanges around lightening holes. Made from 2024 aluminum and hard black anodized. Ball bearing style rollers. Comes with spare set of rollers. P/N 12-00619.....

## SPARE ROLLER-SET OF 2



Replacement rollers for our edge rolling & hole flanging tools (above). P/N 12-00621.....

## WISS COMPOUND ACTION SNIPS



Famous for cutting ease, keeping their edge and making clean, sharp cuts. Hardened molybdenum steel blades, serrated jaws and vinyl comfort grips. Capacity 18 gauge (.049") steel. Length 9-3/4". Wt. 14 oz. P/N 12-01155- Cuts left, from tight curves to straight.....



P/N 12-01189- Cuts right, from tight curves to straight.....



P/N 12-01190- Cuts straight (or wide curves left or right in light stock).....

P/N 12-01190- Cuts straight (or wide curves left or right in light stock).....

12-01189

## IRWIN OFFSET SNIPS



Irwin offset snips handle virtually every cutting job in sheet metal - linoleum, carpet, tile and other materials. They are easier to use than conventional metal snips, and cut in 3 directions. Irwin snips feature forged steel blades, a unique curved handle for comfortable fit in the hand, and an exclusive pinchpoint wire cutter. They cut in three directions—straight, sharp angles in one direction, and 5" diameter circles in the opposite direction. Irwin offset snips make difficult cuts easy - they can make tight circular cuts, cut easily through corrugated metal, and cut solid and stranded wire. Available in right or left cutting models. IRWIN (Right Cutting).....P/N 12-00187..... IRWIN (Left Cutting).....P/N 12-00186.....

TO

# SHEET METAL TOOLS

## SPEED DEBURRING & C'SINKING TOOL



Swivel action - makes deburr & c'sink holes fast & easy. Molded handle with 2" long plated steel "Dog-leg" shaft with 1/4"-28 threaded holder. Includes (1) 3/8" X 100° 3-flute burring cutter (part #1050) + 8" extension shaft for deburring the inside of flanges

& other hard to reach holes. P/N 12-00622

**Handle and Extension Shaft sold separately**

Swivel handle only.....P/N 12-00623

Extension Shaft only.....P/N 12-00624

## BLUE SKY COUNTER SINK DEBURRING TOOL



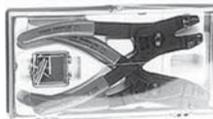
This is an aluminum handle that a counter sink bit will fit into; a clutch mechanism allows the bit to only turn in one direction. The normal "speed de-bur" handle cuts a very irregular pattern and will not countersink, or true up a countersink. This tool will do both countersinking and de-burring. Use any countersink with a 1/4" shaft. P/N 12-01753

## HSS THREE FLUTE BURRING CUTTER - 100°



US made. High speed steel, precision ground, three flute burring cutter. 3/8" diameter X 100° with 1/4-28 threaded shank. Same style as a countersink but without the pilot. P/N 12-00625

## SNAP RING PLIER KIT



Install or remove retaining rings of the Waldes Tru-Arc type with ease. Quality pliers made of heat-treated steel with vinyl covered handles. Kit includes two pair of pliers and two sets of four replacement tips to handle the most common sizes of both internal and external rings. Furnished in plastic box. P/N 4440R

## STRAP WRENCH



Heavy malleable iron body with latex-treated nylon webbing. For gripping and turning of round, hex or square parts without marring the surface. Indispensable tool for use in close quarters where ordinary pliers cannot be used. Tool is 11-1/2" long with 18" strap. Capacity 3". Wt. 1-1/2 lbs. P/N 3004

## TEMPORARY ASSEMBLY PINS



Initial fitting of control surfaces require multiple installation and removals of the parts to fit, trim, and adjust everything. These temporary assembly pins make the task quicker and easier. Pins are 3/16" diameter with tapered points and angle bends for easy installation. The pins are threaded so the pin holder can be removed — this is necessary to prevent damage should you move the control surface too far during fitting. To remove pins just screw holder back on pin and remove pin. Packaged in sets: 6 pins / 2 holders. P/N 12-00627

## BOLT GRIP



This new tool lightly grips the heads of bolts and screws for easier insertion into tight or blind spots. No more dropped or lost parts. Tool has one end for -3 (3/16") fasteners and one for -4 (1/4") fasteners. 12" overall length. P/N 12-00628

## DOUBLE EDGE DEBURRING TOOL



Used to quickly deburr edges of sheets up to 1/8" thick. Save time and motion deburring edges of parts. Precision ground Carbide "V" shape blade with hex aluminum handle. Non-removable cutter style. P/N 12-00629

## BRASS PLUMB BOB



Precision machined brass with clear lacquer finish and hardened replaceable tip. Top unscrews for centered string installation.

**Model :** 6C235 **Size :** 8 oz, 4 7/8" L **Finish :** Clear Lacquer

**Characteristics :** Replaceable Tip, Screw Top To Attach String (String Not Included) P/N 12-01711

## EDGE MARKER BLOCK



This handy device holds a marking pen and has an adjustable stop for running along the edge of a part. The adjustable stop allows variable edge distance for rivet layout, etc. One thumbscrew holds the pen (pen sold separately) and the other thumbscrew holds the adjustable stop. Made from delrin (plastic) material. Comes ready to use with (1) Pilot marking pen. P/N 12-00630

## SHOP HEAD RIVET GAUGE SET



Set of four gauges for -3, -4, -5, & -6 rivets. Each gauge measures MINIMUM height and MINIMUM diameter of shop heads AFTER setting. Eliminates guessing if your rivets are properly set. Works for measuring both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped on each gauge. Color coded anodized finish. Instructions included. P/N 12-00631

## EDGE ROLLING TOOL



For pre-bending skin edges on lap joints and butt joints before riveting. "Edge rolling" will prevent skin edges from curling up during riveting. Machined round body made from 2024 aluminum. Hard black anodized finish for wear resistance. Ball bearing style nylon rollers (non marking); + spare set of rollers and instructions included. P/N 12-00632

## RIVET LENGTH GAUGE



One gauge measures -3, -4, -5, & -6 rivets. Used to check for proper length of rivets BEFORE setting. Eliminates measuring and guessing of rivet lengths. Works for both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet sizes permanently stamped. Gold anodized finish. Instructions included. P/N 12-00633

## STEELMAX MAGNETIC BASE DRILL



SteelMax® brand drills maintain rigidity and accuracy throughout the life of the drill. The rail system eliminates the need to adjust or maintain traditional gibs. In addition to saving on maintenance, cutter life is increased by reducing movement at the cutter tips. When cutters last longer, you save money every day you use SteelMax! **Features:** • Powerful, Portable Drill that cuts through mild steel up to 2

1/16" Diameter, with 2" Depth of cut and weighing only 37 lbs. • Unique low maintenance rail system reduces cutter run out and breakage without adjustments • Dual speed for cutting a variety of hole sizes as small as 1/16" up to 2 - 1/16". Uses adjustable chuck for twist drill bits up to 1/2". • Versatile, Light weight, and powerful, the D2's unique design allows for easy maintenance and repairs in the field, keeping it in service far longer than competitors with gib system designs  
Steelmax Magnetic Base Drill..... P/N 12-01718  
D1 Portable Magnetic Drill..... P/N 12-01811

## STEELMAX METAL CUTTING SAW 9 INCH



More efficient than any portable metal cutting process you are using now! • **Increase Productivity** - No Milling or de-burring with near surgical dry-cut technology. • **Cuts a Variety of Metals, Plastic and Wood** - Bring your saw to the work-piece while cutting mild steel, stainless steel and aluminum as easy as it cuts plywood. • **Cool-to-the-Touch** - No waiting for your workpiece to cool down. Just cut it and handle it. • **Precise Cutting** - With integrated laser sighting system..... P/N 12-01716

## STEELMAX DRYCUT SAW S14



Utilizing a 14" carbide tipped blade, the Steelmax S14 cuts through metal faster, safer and cleaner than abrasive chop saws in a fraction of the time and cost. Powered with a 15 amp motor and geared to turn slower than a chop saw, the S14 dry cutter cuts like a cold saw, but at a fraction of the cost. Sold standard with a 14" carbide tipped mild steel blade attached, heavy duty, industrial strength cast iron base and two position locking vise, this saw is ready for immediate action! Cuts solid mild steel up to 1" thickness; cut profiles: pipe, angles, channel with a depth of cut up to 4-3/4". Bevells to 45 degrees. Saves time and money giving cool cuts that need little to no finishing, eliminating any need for grinding or cool down time..... P/N 12-01717

TO

# METAL WORKING TOOLS

## SHOT BAGS



These shot bags are made out of .070/.090 thick top grain cowhide for extended life and to produce a blemish-free metal surface. These bags have suede outer or forming surface and a tanned inner surface to resist abrasive wear from the media. Convenient media filter and reinforced flap with velcro seal is provided. All bags are approximately 1.5" to 2" thick when filled. Can be filled with buckshot or silica sand (not included) found at most sporting good stores.

Model No.	Size (inches)	Part No.	Price
SB8	8"	12-00995	.
SB12	12"	12-00996	.
SB18	18"	12-00997	.
SBR18 (rectangular)	18"x12"	12-00998	.

## PANEL BEATER HAMMER & DOLLY KIT



The most widely used selection of panel beaters and dollies for most metal shaping needs, professional grade in a molded plastic box. Each hammer is color-coded for either shrinking (blue) or stretching (red) forming tasks. The 3 panel beaters included are the dinging, shallow-domed face and pick hammer combo. The dollies included are the thin toe, utility, curved and heel shapes, providing the user with the best combination kit on the market. See the individual sections on panel beaters and dollies for more specifications on each item. 8-piece kit includes: • DT2566, DT2560 & DDT2537 panel beaters • CP548, CP552, CP553, & CP554 dollies • Blow molded plastic case. All tools made from medium carbon steel, forged, heat treated and mechanically polished for years of continuous service. Weight: 16.5 lbs.; size: 16.5"L x 14"W x 4"H.

P/N 12-01011 .....

## T-DOLLIES

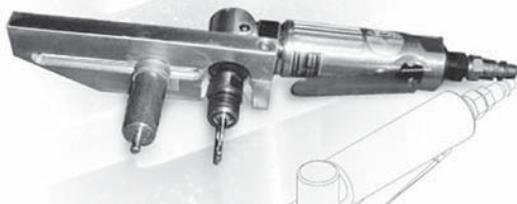


Simple, but necessary forming tool allows you to create new flanges or straighten out damaged flanges. Can be used effectively by taking to an existing body panel or locked in bench vise and create an exact radius edge using any flat faced panel beater or wood slapper. T-dollies are fabricated

out of carbon steel hardened and zinc plated to provide years of service life. Extra long flat handle. Heads have radius ends.

Model No.	Size (inches)	Part No.	Price
DCTD01	1"x 8"	12-01019	.
DCTD02	3/4"x 6"	12-01020	.
DCTD03	1"x 8"	12-01021	.
DCTD 3-pc. kit (8lbs.)		12-01022	.

## ARC360 HOLE CUTTER



The tools on the market for cutting lightning holes in your airframe parts have never impressed me much especially if the holes are larger than a couple of inches in diameter. Panel knock put punches and hole saws work well for holes that are aren't too big but it gets harder and more expensive as the size of the hole increases.

You can cut holes with a router but cutting holes with a router is a cumbersome ordeal. The router is really just too big a tool to be swinging 360 degrees easily. You can set it to cut holes down to around 1.5 inches and up to around 10 inches. The tool's small size allows you to easily see your work as you are cutting. If you want an arc you can start and stop anywhere you want. It will cut any thickness of sheet aluminum and I even made the Mustang-II flap handle notch plates in the photo out of .06 thick 4130 steel.

The cutting speed in 032 thick 2024-T3 aluminum is around 40 inches per minute so you can cut a 4-inch diameter hole in less than 20 seconds.

P/N 12-01977 .....

## MODEL SLP1 MODEL SLP2



## MODEL SLP3 MODEL SLP4



## HARDWOOD SLAPPER

These slappers are made from grade A select midwestern grown hard maple for toughness, stiffness and durability. With an ergonomically designed grip area, the hand and wrist are positioned in a neutral and natural condition. Finished with protective oil that resists staining and guards against moisture penetration. 4 different shapes: gentle, medium, flat, and radius face. The new thinner cross-section of 2-1/4" allows work-

ing a tighter radius in more confined areas. Each slapper comes with a leather face cover to eliminate marring of the metal.

Model No.	Shape Style	Overall Length	Surface Length	Face Width	Weight (Lbs.)	Part No.	Price
SP1	Gentle	14"	8.5"	2.25"	1.3	12-00999	.
SP2	Medium	14"	8.5"	2.25"	1.3	12-01001	.
SP3	Flat	14"	8"	2.25"	1.3	12-01002	.
SP4*	Radius	14"	8.5"	2.25"	1.3	12-01003	.
SLP-001L Replacement leather cover & hardware						12-01004	.

## HAND FORMING DOLLIES



12-01010 12-01009 12-01008



12-01007 12-01006 12-01005

These professional series hand dollies are a complete selection of shapes and weights for most forming needs. These dollies can be used with panel beaters or wood slappers. Dollies weight and shape impacts the flow of the metal. Choose weights according to sheet metal thickness. Medium carbon steel, forged, ground, heat treated and mechanically polished for years of continuous use.

Model No.	Weight (lbs)	Part No.	Price
CP548	2.02	12-01005	.
CP552	2.85	12-01006	.
CP553	2.55	12-01007	.
CP554	1.97	12-01008	.
CP555	3.94	12-01009	.
CP556	3.40	12-01010	.

## PANEL BEATER HAMMERS



12-01027

12-01029

12-01028

12-01030

These professional series panel beater hammers are uniquely balanced acting as a natural extension to the users own hand. Creating excellent feel and feedback each a devery time you contact the metal. Each hamer style is color coded for easy recognition: **MODELS:** DT2537 & DT2566 are Stretching. **MODELS:** DT2560 & D2569 are Shrinking.

Model No.	Head Wt./lbs	Overall Length	"A"	"L"	"B"	Part No.	Price
DT2537	.67	13"	1.6"	5.5"	-	12-01027	.
DT2566	.57	13"	1.5"	5.4"	-	12-01029	.
DT2560	.70	13"	1.6"	3.8"	1.5"	12-01028	.
DT2569	.70	13"	1.6"	3.8"	1.6"	12-01030	.

## BOSSING MALLETS EXTENDED REACH



These extended depth plastic mallets allow deeper reach and a more aggressive and fuller finished shape. The UHMW polyethylene heads are lightweight, resistant to wear and non-marring. Hickory handles with full round shafts. When paired with shot bags, very creative, roughed out forms can be accomplished.

Model No.	Small radius dia.	Large radius dia.	Overall head lgth	Head dia.	Weight (lbs.)	Part No.	Price
DBM01	1/2"	2-1/4"	7"	2"	.70	12-01031	.
DBM02	3/4"	1-3/8"	8"	2-3/4"	1.3	12-01032	.
DBM03	1"	3"	7"	3"	1.5	12-01033	.

TO

# ECONOMY AIRCRAFT TOOLS



## HAND RIVET SQUEEZER

Features includes an all-steel construction, adjustable set holder (accepts all sets with 3/16" shank), and long handles for increased force. The yoke is made of the highest quality tool steel, and by simply removing 3 pins you can change the yoke to match your riveting or dimpling application.

Description	Part No.	Price	Description	Part No.	Price
1" Squeezer	12-01460	.	1" Yoke	12-01457	.
2" Squeezer	12-01461	.	2" Yoke	1201458	.
3" Squeezer	12-01462	.	3" Yoke	12-01459	.

## STAINLESS STEEL HAND SQUEEZER



This stainless steel hand squeeze made of quality stainless steel construction. Features include an adjustable set holder (accepts all sets and dies with 3/16" shank) and a locking lever arm. Yokes are easily interchangeable by simply removing three roll pins and designed to accept yokes and parts made by other stainless steel hand squeeze manufacturers.

1-1/2" ..... P/N 12-01463 .....  
3" ..... P/N 12-01464 .....

## QUICK CHANGE PINS



Quick Change Pin. Makes changing yokes quicker & easier

3/4" ..... P/N 12-01798 .....  
5/8" ..... P/N 12-01799 .....

## INTEGRAL WHOLE TYPE HAND SQUEEZER



A basic tool for all riveting operations. Quality steel construction with black oxide finish and all parts are heat treated. Adjustable set holder accepts dies and sets with 3/16" shank. 1-1/2" reach x 1-1/2" gap.

1-1/2" ..... P/N 12-01465 .....

## RIVET SET FOR SQUEEZER (FLUSH & CUPPED)



Made of steel and heat-treated for long wear and tool life. .187" (3/16") shank.

Description	Part No.	Price	Description	Part No.	Price
Flush 1/8	12-01466	.	Flush 1/2	12-01559	.
Flush 3/16	12-01554	.	Cupped 1/8	12-01561	.
Flush 5/16	12-01556	.	Cupped 5/32	12-01562	.
Flush 3/8	12-01557	.	Cupped 3/16	12-01563	.
Flush 7/16	12-01558	.			

## 1-1/2" AND 3 YOKES



• Holds 3/16" die sets • Adjustable set holder • Stainless steel construction. 1-1/2" ..... P/N 12-01547 .....  
3" ..... P/N 12-01548 .....

## DIMPLE DIES



For any .187 shank diameter squeezer.

3/32" ..... P/N 12-01468 .....  
1/8" ..... P/N 12-01564 .....  
5/32" ..... P/N 12-01565 .....  
3/16" ..... P/N 12-01566 .....

**Economy Dimple Die Set Includes:** 3/32", 1/8", 5/32", 3/16"  
P/N 12-01467 .....

## SCREW REMOVAL TOOL



12-01469

12-01567

\* Useful in removing screws that are corroded or have stripped heads  
\* 401 Parker taper shank for use in rivet gun  
\* 3/8" square socket end with 1/4" hex adapter included  
\* Use standard Phillips or Slotted insert bits  
\* Rivet gun required  
4" Tool ..... P/N 12-01567 .....  
8" Tool ..... P/N 12-01469 .....

## MICRO-STOP



This tool permits you to set the desired cut depth to help eliminate mistakes and skin damage.

- 1/4" Shaft travel
- Depth adjustable in .001" increments
- 1/4"-28 Female Threads
- Rated for 3,000 RPM

P/N 12-01470 .....

## HEAVY DUTY RIVET CUTTER



This high quality, durable rivet cutter features all steel construction and cuts 1/16" to 1/4" diameter rivets. It is adjustable for 1/4" to 3/4" long rivets.

P/N 12-01471 .....

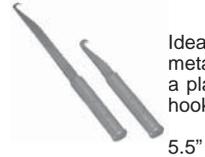
## ALUMINUM BODY MINI AIR VACUUM



removed for cleaning.

A handy air powered vacuum works off an air compressor and is simple to use. Attached 12" clear plasticflex tube can easily get into tiny spaces to clean. The canvas bag is easily  
P/N 12-01474 .....

## CHIP CHASER



Ideal for removing chips and burrs from between metal after drilling rivet holes. Each chaser features a plastic molded handle and flexible steel blade with hook on the end. Blades are 5.5" and 2.5" long.

2.5" ..... P/N 12-01597 .....  
5.5" ..... P/N 12-01476 .....

## DOGGLE DEBURRING TOOL



Swivel action of this tool makes deburring holes fast and easy. Shaft includes a 1/4"-28 threaded holder.

P/N 12-01478 .....

## BURNISHING SPOON



Designed to remove surface blemishes in aircraft sheet metal. Hard chrome plated. Comfort grip handle.

P/N 12-01479 .....

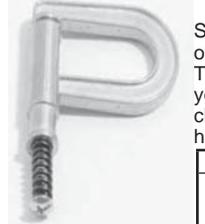
## CLECO PLIERS



Used in limited access areas, requires less travel per activation.

P/N 12-01480 .....

## SPRING TENSION CLAMPS (ZINC ALLOY YOKE OR STEEL YOKE)



Spring tension clamps can be applied in a fraction of the time required for ordinary screw clamps. The clamp, with 2" throat depth, has a Zamak alloy yoke and a steel spring which provides a 70 lb. clamping pressure. Designed for use with sheet holder pliers.

Description	Part No.	Price
Zinc Alloy	12-01481	.
Steel 2"	12-01482	.
Steel 3"	12-01483	.

## SIDE GRIP CLAMPS



Designed to hold two or more work pieces together where no holes exist. Clamping force is applied at edge of work. Spring loaded, plier actuated. The lack of a takeup screw makes it impossible to over-tighten and damage the work surfaces or the clamp. There are 4 standard sizes : 1/2 x 1/2", 1/2 x 1", 3/4 x 1/2", 3/4 x 1".

Description	Part No.	Price
1/2" x 1/2"	12-01484	.
1/2" x 1"	12-01485	.
3/4" x 1/2"	12-01486	.
3/4" x 1"	12-01487	.

## DRILL STOPS



Use when drilling in sheet metal to help eliminate drill breakage & surface marks. Safely keeps drill from going too far through the work. Drill stops have a coiled spring to cushion the drill breakthrough & prevents the drill chuck from marring the work surface. Color coded for easy identification.

#10 ..... P/N 12-01488 ..... #20 ..... P/N 12-01489 .....  
#30 ..... P/N 12-01490 ..... #40 ..... P/N 12-01491 .....  
#1/4 ..... P/N 12-01492 ..... #5/16 ..... P/N 12-01493 .....

## CYLINDER BASE NUT WRENCHES



Where torque application accuracy is critical these tools meet the requirement. They offer excellent rigidity and surpass other wrenches in overall quality and efficiency. Wrench Type A is for sizes 1/2", 9/16", 5/8", and 3/4" hex nuts. Wrench Type B is for 3/8" and 1/2" internal hex.

Type A 1/2" ..... P/N 12-01525 .....  
Type A 9/16" ..... P/N 12-01568 .....  
Type A 5/8" ..... P/N 12-01569 .....  
Type A 3/4" ..... P/N 12-01570 .....

TO

# ECONOMY AIRCRAFT TOOLS

## STRAP DUPLICATOR (BUSHING TYPE)



For drilling an accurate hole in overlapping sheets. The Bushing type duplicator is used by sliding the end with the pin between the sheets and locating the hole to be duplicated from inside. #10?#21?#30?#40?1/4 drill sizes, 6 1/4" or 13 1/4" lengths.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01494	.	#10 13-1/4"	12-01499	.
#20 6-1/4"	12-01495	.	#20 13-1/4"	12-01501	.
#30 6-1/4"	12-01496	.	#30 13-1/4"	12-01502	.
#40 6-1/4"	12-01497	.	#40 13-1/4"	12-01503	.
1/4" 6-1/4"	12-01498	.	1/4" 13-1/4"	12-01504	.

## STRAP DUPLICATOR (PUNCH TYPE)



For drilling an accurate hole in overlapping sheets. The punch type duplicator comes with hardened marking pin. Permit the marking sheet metal from a hidden pilot hole. #10?#21?#30?#40?1/4 drill sizes, 6 1/4" or 13 1/4" lengths.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01505	.	#10 13-1/4"	12-01510	.
#20 6-1/4"	12-01506	.	#20 13-1/4"	12-01511	.
#30 6-1/4"	12-01507	.	#30 13-1/4"	12-01512	.
#40 6-1/4"	12-01508	.	#40 13-1/4"	12-01513	.
1/4" 6-1/4"	12-01509	.	1/4" 13-1/4"	12-01514	.

## ECONOMY BLIND HOLE SPOTTERS



Size: 5/16" PN 12-01775    Size: 1/4" PN 12-01774    Size: 3/16" PN 12-01773    Size: 5/32" PN 12-01772    Size: 1/8" PN 12-01771

For inserting into drilled holes already bored and marking exact center for opposite hole. Available size: 5/16", 1/4", 3/16", 5/32" and 1/8"

Description	Part No.	Price	Description	Part No.	Price
5/16"	12-01775	.	5/32"	12-01772	.
1/4"	12-01774	.	1/8"	12-01771	.
3/16"	12-01773	.			

## EDGE BREAKER



This tool allows the quick removal of burrs and roughness from the edges of sheet metal. .25" or .187" in diameter grooved blade with safety shield. Safety-grip plastic handle. P/N 12-01527

## HAND SEAMER



Large jaws are machined for smooth, parallel fit. Forms precise folds and seams. Has rounded jaws to prevent tearing when bending of aluminum and other light metals. Depth of throat 1". Width of jaws 3-1/2". Overall length 8". P/N 12-01528

## AIR SWIVELS & REGULATOR TOOLS



Air Swivel Connector W/ Regulator (Pictured to the left) .....P/N 12-01530  
Air Swivel Connector .....P/N 12-01529  
Air Swivel Regulator .....P/N 12-01545

## BRASS RIVET SET

This rivet set has a soft face to prevent damage to the fastener when inserted or removed. Fits into any standard rivet gun or air hammer that supports .401" shank tooling, 3 1/8" overall length. P/N 12-01543



## RIVET GUN SHAFT REDUCER



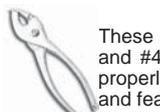
Rivet set adapter sleeve, .401 shank. Made of hardened steel (SKD11) and is open at both ends to allow maximum riveting power. P/N 12-01544

## ECONOMY SAFETY WIRE TWISTERS



These top quality twisting lock pliers with automatic return are economically priced and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire. Length 6" & 9". Foreign made. 6" ..... P/N 12-01472  
12" ..... P/N 12-01473

## CAMLOC PLIERS



These Camloc Pliers are used to depress #2600, #2700 and #4000 series Camloc (C-LOCK) studs so they can be properly installed. Pliers are manufactured from forged steel and feature polished bearing surfaces to avoid scratching the stud as it's being installed. The grips are rubber cushioned for extra comfort and to reduce slipping. P/N 12-01475

## CANNON CONNECTOR PLIERS



The tool features serrated jaws for improved gripping and a slip joint for improved leverage. Ideal for all common cannon connector applications. P/N 12-01531

## SHOP HEAD RIVET GAUGE SET



Set of four gauges for -3, -4, -5, -6 rivets. Each gauge measures Minimum height and Minimum diameter of shop heads AFTER setting. Eliminates guessing if your rivets are properly set. Works for measuring both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped on each gauge. Color coded anodized finish. P/N 12-01533

## RIVET LENGTH GAUGE



One gauge measure -3, -4, -5, -6 rivets. Used to check for proper length of rivets Before setting. Eliminates measuring and guessing of rivets lengths. Works for both universal head and flush rivets. Precision machined to size from 2024 aluminum. Rivet size permanently stamped. Blue anodized finish. P/N 12-01534

## DRILL EXTENSION THREADED



Use these different length extensions in your 90° or 45° drills. 1/4"-28 male threads on one end and 1/4"-28 female threads on other. 2" ..... P/N 12-01535  
4" ..... P/N 12-01536  
6" ..... P/N 12-01537

## DRILL EXTENSION DUAL THREADED



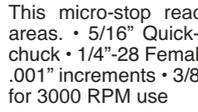
Use these different length extensions in your 90° or 45° drills. 1/4"-28 male threads on one end and 1/4"-28 female threads on other. Comes in three different lengths 1" 2" 4". 2" ..... P/N 12-01541  
4" ..... P/N 12-01542

## SLIM MICRO-STOP



A slim design that's only 11/16" outside diameter. Used for those narrow areas that can't be reached with a standard micro-stop. • 1/4" Shaft • 1/4"-28 Female Threads • Adjustable in .001" increments • 1/2" Cutter Capacity • Rates for 3000 RPM use. P/N 12-01790

## MICRO-STOP (LONG NOSE)



This micro-stop reaches into very confined areas. • 5/16" Quick-change Shaft or regular chuck • 1/4"-28 Female Threads • Adjustable in .001" increments • 3/8" Cutter Capacity • Rates for 3000 RPM use P/N 12-01789

## MICRO-STOP (NYLON FACE)



• 1/4" Shaft • 1/4"-28 Female Threads • Adjustable in .001" increments • 11/16" Cutter Capacity • Rates for 3000 RPM use P/N 12-01788

## RADIUS CHECK



Radius Check is a hand-held tool which can be used to check the radius of parts and panels used in the construction or restoration of aircraft. Also used extensively in the restoration of antique and classic automobiles. P/N 12-21595

## RADIUS OR FILLET GAUGES



16 leaves, especially for checking radius of inside and outside fillets and corners. Checks 1/32 to 17/64" by 64ths. P/N 432A

TO

# ECONOMY AIRCRAFT TOOLS



## ECONOMY RIVET GUNS

These popular 2X /3X /4X rivet guns used in aircraft manufacturing plants worldwide. "X" series rivet gun has an incomparable teasing triggers, allowing you to slowly begin riveting without damaging the skin. A lightweight aluminum handle with powder coat finish for comfort. Hardened & precision ground steel piston, cylinder, spool valve for long life. Includes spring retainer & brass air regulator.

Length	BPM	Ca-pacity	Bore	Shank	Stroke	Weight (lbs)	Part No.	Price
6-11/16"	2580	1/8"	1/2"	.401"	2-1/4"	3.1	12-02034	.
7-5/16"	2160	3/16"	1/2"	.401"	2-7/8"	3.2	12-02035	.
8-1/2"	1740	1/4"	1/2"	.401"	3-1/16"	3.4	12-02036	.

## ECONOMY FLUTING PLIERS

Narrow type fluting pliers are used for straightening out or coaxing sheet metal into the correct shape. This tool makes narrow and precise flutes in sheet metal.



P/N 12-01782.....

## RIVET HOLDER

This tool holds your rivet, small bolt, or screw so you can get into those hard-to-reach areas.

P/N 12-01791.....



## QUICK-CHANGE CHUCK

Allows tool change in seconds. Designed for drilling bits, countersinks, etc. with quick-change ends. 3/8" x 24 thread.

P/N 12-01778.....



## C-SET

This C-Rivet Set bends around obstacles and allows you to reach into awkward areas for riveting. • 3/16" diameter hole for any squeezer sets or dimple dies with 3/16" shaft • 401 shaft

P/N 12-01776.....



## 60° C-SET

Excellent for limited access areas. • 60° Angle • .401 shaft

P/N 12-01777.....



## FORD WRENCH



- General-purpore adjustable wrench in available in 2 sizes
- Sliding Jaw
- Forged from Crescent special Analysis Tool Steel
- Chrome-plated
- Precision Machined

9" Wrench ..... P/N 12-01783 .....  
11" Wrench ..... P/N 12-01784 .....

## SEALANT MIXER

Designed to quickly and efficiently mix all types of pre-filled Semkit® packages. Has a 1/4" shank. Chuck it up in your drill to mix Semkit® sealant tubes.

P/N 12-01792.....



## RED BOX RIVET GUN TOOL KITS

### RED BOX RIVET GUN TOOL KITS



\* 1pc Rivet Gun (Choose Size 2X, 3X or 4X) \* 1pc Brass Regulator \* 1pc Beehive Retainer \* 1pc Handi Retainer \* 4pcs 3.5" Straight Rivet Set (3/32", 1/8" 5/32", 3/16") \* 1pc Standard Flush Set (size: surface diameter 1", length 2-1/2") \* 1pc Marvel Air Tool Oil (Made in USA) \* 1pc Thread Seal Tape \* 1pc Air Tool Fitting  
2X Rivet Gun Tool Kit ..... P/N 12-02047.....  
3X Rivet Gun Tool Kit ..... P/N 12-02048.....  
4X Rivet Gun Tool Kit ..... P/N 12-02049.....

## RED BOX FLUSH RIVET SET

P/N 12-02050.....



## RED BOX 3.5" RIVET SET

3.5" Rivet (3/32") ..... P/N 12-02051.....  
3.5" Rivet (1/18") ..... P/N 12-02052.....  
3.5" Rivet (5/32") ..... P/N 12-02053.....  
3.5" Rivet (3/16") ..... P/N 12-02054.....



## TURNBUCKLE WRENCH

2 inch diameter turnbuckle wrench easily rotates turnbuckle while chain tool holds the cable ends in precise alignment and prevents them from rotating.

P/N 12-01795.....



## TURNBUCKLE CHAIN TOOL

This tool consists of two clamps joined by sprocket type (bicycle) chain. When clamped to cable and fittings at each side of the turnbuckle, anchor the cable to allow free adjustment of the turnbuckle. The adjustment becomes a two hand instead of three hand adjustment.

P/N 12-01794.....



## SPEED HANDLE 3/8"

Useful for quickly tightening and loosening a nut or bolt particularly where other types of wrenches will not reach.

P/N 12-01797.....



## PHENOLIC SCRAPER

Scraper Blade, 2" wide x 6.5" long x 3/8" thick. Designed for use with a rivet gun (.401 shank). Phenolic scrapers are perfect for safely removing sealant, adhesives, stickers, labels, grime, and more.

P/N 12-01796.....



## SKIN WEDGE

Made of 4130 steel and heat-treated to perfection. • 7" long x 1" wide • Body thickness 1/4"....  
P/N 12-01793.....



## HEX KEYS

Designed to use when installing Hi-Lok style fasteners. Includes set screw and Allen key.

1/8"..... P/N 12-01785.....  
5/64"..... P/N 12-01786.....  
3/32"..... P/N 12-01787.....



## ECONOMY DRILL EXTENSION THREADED

Has a 5/16" quick change shaft on one hand and 1/4" -28 female threads on the other. Allows you to chuck threaded drill bits or countersinks into a quick-change chuck.

P/N 12-01781.....



TO

# ATS TOOLS - PORTABLE COMPRESSORS

## PORTABLE COMPRESSORS



### HOT DOG

- 6 Gallon Tank
- Runs at 3300 rpm
- 2 HP motor
- 4.1 - 5.1 @ 90 PSI
- Weight 57 lbs.
- Recommended for Pneumatic Tools

P/N 12-01407



### PANCAKE

- 4 Gallon Tank
- Runs at 3300 rpm
- 2 HP motor
- 4.1 - 5.1 @ 90 PSI
- Weight 62 lbs.

P/N 12-01408



### TWIN TANKER

- Two 2 Gallon Tanks
- Runs at 3300 rpm
- 2 HP motor
- 4.1 - 5.1 @ 90 PSI
- Weight 60 lbs.
- Recommended for Paint Guns

P/N 12-01409

## ATS AIR NIBBLER



### ATS8300

- Cuts up to 16 ga (.060" / 15 mm) steel or aluminum
- Easily replaceable punch and die
- Weight 1.74 lbs (.79 kg)

P/N 12-01414

## ATS PUNCH & FLANGING TOOLS



### ATS8400

- Capacity 16ga (.060"/15mm) steel
- Punch Diameter 3/16" (5 mm)
- Flange width 1/2" (12 mm)
- Rubber comfort grip
- 9-3/4" (248 mm) Overall Length
- 2.75 lbs (1.25 kg)

P/N 12-01413

## ATS AIR POWER RECIPROCATING SAW KIT



### ATS8202K

- Cuts up to 16 ga (.060" / 15 mm) steel or aluminum
- .063" (16, mm) Stroke Length
- 10,000 Strokes Per Minute (SPM)
- Weight 2.1 lbs (1.35 kg)

P/N 12-01419

## ATS 90 DEGREE ANGLE DRILL



### ATS6132

- Spindle 1/4"-28 Thread
- Head Length 1.08" (2.7 mm)
- 2,800 RPM
- Head Width .65" (1.6 mm) .33 hp
- 10" (254 mm) Overall Length
- Variable speed control
- 1.6 lbs (.73 kg)

P/N 12-01422

## ATS TOOLS

### ATS MNI ANGLE DIE GRINDER



### ATS5105

- 1/4" (6.4 mm) Collet Size
- 5-1/2" (140 mm) Overall Length
- 1.1 lbs (.5 kg)
- 20,000 RPM Free Speed)

P/N 12-01416

### ATS MINI DIE GRINDER



### ATS5101

- 1/4" (6.4 mm) Collet Size
- Front exhaust keeps work area clean
- Very light weight .79 lbs (.36 kg)
- 26,000 RPM Free Speed)

P/N 12-01417

### ATS 3" CUT-OFF TOOL



### ATS8502

- 3" (75 mm) disc capacity, 3/8" (15 mm) mount
- Free speed 20,000 RPM
- Weight 1.74 lbs (.79 kg)

P/N 12-01420

## ATS AIR HYDRAULIC RIVETER



### ATS8805

- Pulling Force 2,300 lbs (1,045 Kg)
- Rivet Capacity 3/16" aluminum or mild steel
- Stroke Length .63" (16 mm)
- Nosepieces: 3/32" (2.4 mm), 1/8" (3.2 mm), 5/32" (4.0 mm), 3/16" (4.8 mm)
- Weight 3.26 lbs (1.48 kg)

P/N 12-01423

## ATS HEAVY DUTY AIR DRILL



### ATS6101

- 3/8" (9.5 mm) Jacobs® Chuck
- Full Cage Gear
- 2,600 RPM
- Variable speed control
- .67 hp (.5 kw)
- Ergonomic Design for Maximum Comfort
- 7-1/2" (190 mm) Overall Length
- 2.07 lbs (.94 kg)

P/N 12-01418

## ATS HD REVERSIBLE AIR DRILL



### ATS6104

- 3/8" (9.5 mm) Jacobs® Chuck
- Full Cage Gear For Smooth Operation
- 2,400 RPM • Variable Speed Control
- Fully Reversible with Positive Stop
- 7-1/2" (190 mm) Overall Length
- .67 hp (.5 kw)
- 2.86 lbs (1.3 kg)

P/N 12-01421

## ATS PALM DRILL



### ATS6100

- 1/4" (6.4 mm) Jacobs® Chuck
- Two-stage (Low/High) Control Trigger
- 5-7/8" (150 mm) Overall Length
- 1.54 lbs (.7 kg)
- 2,800 RPM Free Speed

P/N 12-01424

TO

# BOSCH POWER TOOLS



## BOSCH 10.8V I-DRIVER

**MODEL PS10-2** - Includes: (1) - Carrying Case (2) - 1.5" Power Drive Bits (1) - 30 Minute Charger (2) - Lithion™ 10.8V Batteries **Features:** • 80 in. - lbs. of Torque — Drives 100 3-inch screws per battery charge • Ultra-Compact Head Length — 3.5" total head length - 3 times shorter than most popular competitor • 90-Degree Articulating Head • 7+1 Electronic Clutch • Forward/Reverse Button — Equally useful at driving or removing screws • Quick Change Chuck- pull to insert or release 1/4" hex shank bits • Storage Hanger — Convenient tool storage between uses • Variable Speed Trigger — Revolutionary design provides increased sensitivity and control P/N 12-01754 .....



## BOSCH 10.8V POCKET DRIVER

**MODEL PS20-2** - Includes: (1) -- Carrying Case (2) -- 1.5" Power Drive Bits (1) -- 30 Minute Charger (2) -- Lithion™ 10.8V Batteries **Features:** • 80 in. - lbs. of Torque — Drives 100 3-inch screws per battery charge • Ultra-Compact Power & Design — Almost half the size of a 12V compact drill/driver • LED Light — For tight spaces and applications • Forward/Reverse Button — Equally useful at driving or removing screws • Quick Change Chuck — Prevents bit loss in drill or drive mode - pull to insert or release 1/4" hex shank bits • 10+1 Clutch — Enables precision driving and eliminates over torque in soft base materials. Max mode allows pilot and other small bore holes • Variable Speed Trigger — For increased sensitivity and control P/N 12-01755 .....



## BOSCH 10.8V LITHEON IMPACTOR FASTENING DRIVER

**MODEL PS40-2** - Includes: (1) -- Carrying Case (2) -- 1.5" Power Drive Bits (1) -- 30 Minute Charger -- BC430 (2) -- Lithion™ 10.8V Batteries -- BAT411 **Features:** • 60% more torque than 18V drill/driver - 800 in.-lbs of max torque • Bosch Designed Hammer and Anvil System — Delivers 1,800 RPM/3,000 BPM • LED Light Ring — 3 LEDs illuminate work area for use in dark areas • Lithion™ 10.8V Batteries — • Spring-Loaded Impact Mechanism — Reduces user fatigue • Aluminum gear housing with protective rubber front • 1/4" hex shank with quick release • Ergonomic Soft Grip Handle — For extended comfort and control • Bumpers on Side of Tool — Protect work surface and prevent slipping • Variable Speed Trigger — For complete control P/N 12-01756 .....



## BOSCH 18V IMPACTOR CORDLESS IMPACT WRENCH

**MODEL 22618** - Includes: (2) -- 2.4A-h Batteries - BAT181 (1) -- 30 Minute Charger - BC130 (1) -- Tool Hook - IMPK-HOOK (1) -- Carrying Case - Included (1) -- Gear Box Cover **Features:** • Innovative Hammer & Anvil System delivers up to 1,950 in/lb of torque 1/2" Square Drive Anvil • Soft-grip handle, not the user, absorbs the impact during fastening applications — Reduces fatigue and stress, provides maximum cushioning and comfort • Cutting-edge, high-performance motor and all-metal gears — Super fast operating speed, delivering a category-best 3,200 BPM and 2,800 RPM • Optional Gear Box Cover — For Added Protection • Lightweight 4.6 pounds and 6.5 inches in length — Incredibly versatile for use in dozens of drilling, fastening and driving applications • Aluminum gear housing with protective rubber front Variable-speed trigger — For complete control • Externally accessible brushes — For easy brush replacement • Multi-purpose reversible tool hook • Multiple-position swivel LED lighting system — Increases visibility - great for dark or enclosed areas P/N 12-01757 .....



## BOSCH 18V IMPACTOR CORDLESS IMPACT WRENCH

**MODEL 22618** - 12V Battery for medium-duty jobs. 14.4V Battery for heavy-duty jobs. The Most Powerful Impact Wrench In The Line Up! 18V Battery for heavy-duty jobs. Faster and more powerful than standard impact drivers. The most lightweight driver in the line up. 9.6V Battery for medium-duty jobs **Includes:** (2) -- 2.4A-h Batteries - BAT181 (1) -- 30 Minute Charger - BC130 (1) -- Tool Hook - IMPKHOOK (1) -- Carrying Case - Included (1) -- Gear Box Cover P/N 12-01758 .....



## BOSCH 18V COMPACT TOUGH 1/2 INCH DRILL/DRIVER

**MODEL 34618** - Includes (2) 2.0A-h Batteries - BAT180 (1) 30-Minute Single Bay Charger - BC130 (1) Double-ended Bit Carrying Case **Features:** • 80 in.-lbs more torque, 150 RPM faster than previous generation • New ratcheting, single sleeve 1/2" Chuck - For one-handed bit changes • DuraShield™ housing • High torque mode produces 390 in.-lbs. • High speed mode produces 1,450 RPM • New Compact™ Tough Design • 20 Position Clutch • Variable-speed trigger • Ergonomic Soft Grip Handle — For extended comfort and control P/N 12-01759 .....



## BOSCH 18V CORDLESS JIGSAW KIT

**MODEL 52318** - Includes (1) -- 2.4A-h Battery - BAT026 (1) -- 1-Hour Charger - BC004 (1) -- Carrying Bag - 2610914300 (2) -- Blades - T123X, T345XF (1) -- No Mar Overshoe - 2608000184 **Features:** One-Touch™ blade change system for quick blade changes • Patented Bosch blade retention • Powerful, Bosch built motor and magnesium gear housing • Large, die-cast aluminum foot • Variable speed trigger with ambidextrous lock-off switch • Ergonomic soft grip handle design with multi position grip area P/N 12-01762 .....



## BOSCH 18V CORDLESS PLANER

**MODEL 53518** - The Only Full Size Cordless Planer on the Market. Never worry again about running out of cord in the middle of a planing job! Sold as Tool Only (without battery, charger or carrying bag) so it can be efficiently added to any Bosch 18V Cordless System. Sold as Tool Only (without battery, charger or carrying bag) so it can be efficiently added to any Bosch 14.4V Cordless System. Includes: (1) -- Chip Bag - 2605411035 (2) Woodrazor® Blades - PA1202 (1) -- Edge Guide Fence -- PA1203 (1) -- 2.4A-h Battery - BAT026 (1) -- 1-Hour Charger - BC004 (1) -- Carrying Bag - 2610914300 P/N 12-01763 .....



## BOSCH 4-1/2 INCH PADDLE SWITCH GRINDER

**MODEL 1810PS** - Paddle switch with lock-on for better operator comfort and control. Directed air flow diverts dust away from switch and vital components. Includes: Guard, Vibration Control Auxiliary Handle, Flange Kit, Spanner Wrench, Abrasive Wheel **Features:** • Paddle Switch with Lock-on • Vibration Control Handle • AC/DC capability • Sealed switch • ServiceMinder™ brushes • Epoxy Coated Field Windings • 5/8" -11 Spindle • Tool-free adjustable guard • Spindle Lock • Directed Air Flow P/N 12-01764 .....



## BOSCH TOP HANDLE JIG SAW

**MODEL 1590EVSK** - ProVantage 3-year Protection Plan. Includes: • Precision for Wood Blade • Progressor® Wood Blade • Tight kerf blade -- T244D • Zero-clearance Insert • Non-marring Footplate • Carrying Case **Features:** • 6.4 Amps • Precision Control™ system • One-Touch™ blade change • Quick bevel adjust cast aluminum foot • Constant Response™ circuitry • T-shank machined plunger • Robust 3-point connection • No blade play • On/off blower switch • 4-position orbital control • Variable speed trigger • Variable speed dial • Lock on button • Adjustable dust blower keeps cutting line clear P/N 12-01765 .....



## 5 INCH RANDOM ORBIT SANDER

**MODEL NO. ROS20VSK** - Features: • Best all-around sanding performance and convenience. • Twist-off translucent dust canister shows dust level and detaches easily. Ant-spillback design prevents dust from spilling on removal. • Bosch Microfilter system traps dust particles as small as 1/2 micron. • Hook-Tight™ hook-and-loop disk attachment ensures firm grip of standard hook-and-loop sanding discs. • Comfortable, ergonomic soft-grip top and body • Integral pad dampening system prevents swirl marks • Soft microcellular backing pad ensures smooth, fine finish on flat or contoured surfaces. • Variable-speed dial allows matching of speed to work piece and task. P/N 12-01766 .....



## BOSCH 3-1/4 INCH PLANER

**MODEL 3365** - Includes: (2) Woodrazor™ Blades, Guide Fence, Blade Wrench, Chip Bag. **Features:** • Powerful 5 Amp Motor, 18,000 RPM. • Electronically-Counterbalanced Single-Blade System automatically positions blade at ideal cutting angle. • Eliminates uneven planing caused by misaligned blades. • Equipped with Bosch Woodrazor™ micrograin carbide blades, which resist fractures from nail and staple strikes. • Ratcheting Depth Knob. • No need to re-zero the depth. • Chip Ejection Switch. • Edge Guide Fence. • Has a protective shield that covers the section of blade not in use. • Lock-off Release Button. • Park Rest Stand • Double insulated, UL listed, complies to OSHA. P/N 12-01767 .....



## BOSCH PROGRAMMABLE HEAT GUN KIT

Model 1944LCDK - Features: • 12.5 Amps, 120-1,100°F. • Cool air setting. • Double insulated, UL listed, complies to OSHA. • Ergonomically-designed controls. • Infinite temperature range and blower speeds. • Integral stand. • LED temperature indicator. • Lightweight. • Multiple uses — Strip paint, shrink tubing or packaging, heat liquids, loosen fittings, soften caulking and surface finishes, thaw pipes. • Range of accessories. • Removable heat shield. P/N 12-01768

TO

# SUNEX TOOLS

## SUNEX PNEUMATIC TOOLS

### 1/4" DRIVE MINI AIR RATCHET WRENCH



SX1068 Specification	
Free Speed (RPM) @90PSI	230
Torque (ft.lbs.) @90PSI	25
Square Drive	1/4
Min. Hose Size	2/8
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	3
Sound Level (dBA)	87
Length (In.)	8

- \* Lever throttle for positive speed control
- \* Ball detent socket retainer
- \* Rear exhaust
- \* Also available: 1/4" head kit P/N 12-01932 .....

### 1/2" DRIVE IMPACT WRENCH



SX634CZ Specification	
Square Drive (In.)	1/2
Max. Torque (ft. lbs. @90PSI)	220
Working Torque (ft.lbs.)	50-190
Free Speed (RPM@90PSI)	7,000
Air Inlet (NPT)	1/4
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	103
Length (In.)	7

- \* Rocket dog clutch mechanism
- \* Built-in regulator for positive speed control
- \* Balanced design for ease of handling
- \* Protective PVC rubber cover
- \* The most economical 1/2" Impact wrench P/N 12-01936 .....

### 3/8" DRIVE PISTOL GRIP IMPACT WRENCH



SX821A Specification	
Square Drive (In.)	3/8
Max. Torque (ft. lbs. @90PSI)	75
Working Torque (ft.lbs.)	30-60
Free Speed (RPM@90PSI)	10,000
Air Inlet (NPT)	1/4
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	84
Length (In.)	5

- \* Ring socket retainer for rapid socket changes
- \* Front bumper for added protection
- \* Built-in regulator for added protection
- \* Reliable dog clutch mechanism for dependable service
- \* Reliable dog clutch mechanism for dependable service P/N 12-01937 .....

### 1/2" DRIVE HEAVY DUTY IMPACT WRENCH



SX821A Specification	
Square Drive (In.)	1/2
Max. Torque (ft. lbs. @90PSI)	450
Working Torque (ft.lbs.)	25-350
Free Speed (RPM@90PSI)	7,000
Air Inlet (NPT)	1/4
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	103
Length (In.)	7.4

- \* High-powered pin clutch delivers over 450 ft. lbs. of maximum torque
- \* Working torque range 25-350 ft. lbs.
- \* Rear knob regulator and variable speed trigger allow precise speed control
- \* Cushion grip design for comfort and control P/N 12-01938 .....

### MEDIUM DUTY AIR HAMMER



SX275B Specification	
Blows Per Minute	3,000
Bore (in.)	11/16
Stroke (In.)	2-5/8
Air Inlet (NPT)	1/4
Min. Hose Size (I.D.)	3/8
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	105
Length (In.)	6.75

- \* Built-in regulator
- \* Accepts .401" Parker taper shank chisels
- \* An excellent general purpose hammer
- \* Quick change retainer spring P/N 12-01935 .....

### SHORT AIR HAMMER



SX821A Specification	
Blows Per Minute	4,500
Bore (In.)	1-5/8
Stroke (In.)	1-5/8
Air Inlet (NPT)	1/4
Min. Hose Size (I.D.)	3/8
Recommended Air Pressure (PSI)	90
Average Air Consumption (CFM)	4
Sound Level (dBA)	105
Length (In.)	5.5

- \* Built-in regulator
- \* Accepts .401" Parker taper shank chisels
- \* Ideal for standard duty applications
- \* 3 pc. chisel set included
- \* Quick change retainer spring P/N 12-01934 .....

## SUNEX SANDING TOOLS

### 1/4" MINI DIE GRINDER



SXC201 Specification	
Collect Size (In.)	1/4
Length (In.)	6.1
Maximum Speed (RPM)	25,000
Air Inlet (In.)	1/4
Minimum Hose Diameter (In.)	3/8
Avg. Air Consumption (CFM)	2.1
Weight (Lbs.)	0.9

- \* Durable comfort grip
- \* Twin bearing spindle increases precision and decreases vibration
- \* 360° adjustable rear exhaust directs air away from work
- \* Built-in speed regulator
- \* Locking throttle lever for safety P/N 12-01939 .....

### 1/4" MEDIUM DIE GRINDER



SXC205 Specification	
Collect Size (In.)	1/4
Length (In.)	7
Maximum Speed (RPM)	22,000
Air Inlet (In.)	1/4
Minimum Hose Diameter (In.)	3/8
Avg. Air Consumption (CFM)	3
Weight (Lbs.)	1.3

- \* Durable comfort grip
- \* Twin bearing spindle increases precision and decreases vibration
- \* 360° adjustable rear exhaust directs air away from work
- \* Built-in speed regulator
- \* Locking throttle lever for safety P/N 12-01940 .....

### 3" UTILITY CUT-OFF TOOL



SXC209 Specification	
Wheel Size (In.)	3
Length (In.)	7.6
Maximum Speed (RPM)	21,000
Air Inlet (In.)	1/4
Minimum Hose Diameter (In.)	3/8
Avg. Air Consumption (CFM)	3
Weight (Lbs.)	1.8

- \* Durable comfort grip
- \* Twin bearing spindle
- \* 360° adjustable rear exhaust directs air away from work
- \* Built-in speed regulator
- \* Locking throttle lever for safety
- \* High-torque motor for maximum efficiency P/N 12-01941 .....

### 2" ANGLE GRINDER



SXC606 Specification	
Wheel Size (In.)	2
Length (In.)	7.4
Maximum Speed (RPM)	15,000
Air Inlet (In.)	1/4
Minimum Hose Diameter (In.)	3/8
Avg. Air Consumption (CFM)	3
Weight (Lbs.)	1.6

- \* Durable comfort grip
- \* 90° angle head for restricted areas
- \* 360° adjustable rear exhaust directs air away from work
- \* Built-in speed regulator
- \* Locking throttle lever for safety
- \* High-torque motor for maximum efficiency P/N 12-01942 .....

### 4.5" ANGLE GRINDER



SXC610 Specification	
Wheel Size (In.)	4.5
Length (In.)	9.6
Maximum Speed (RPM)	10,000
Air Inlet (In.)	1/4
Minimum Hose Diameter (In.)	3/8
Avg. Air Consumption (CFM)	5
Weight (Lbs.)	3.3

- \* Durable comfort grip
- \* 100° angle head for restricted areas
- \* 360° adjustable rear exhaust directs air away from work
- \* Built-in speed regulator
- \* Locking throttle lever for safety
- \* High-torque motor for maximum efficiency P/N 12-01943 .....

TO

# SUNEX TOOLS

## SUNEX SOCKET SETS

### 1/2" DRIVE STANDARD 13 PIECE SAE IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2650 Includes: 7/16" 1/2" 9/16" 5/8" 11/16" 3/4"  
13/16" 7/8" 15/16" 1" 1-1/16" 1-1/8" 1-1/4"  
P/N 12-01945.....

### 1/2" DRIVE DEEP 13 PIECE SAE IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2651 Includes: 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16"  
7/8" 15/16" 1" 1-1/16" 1-1/8" 1-1/4"  
P/N 12-01946.....

### 1/2" DRIVE STANDARD 14 PIECE METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2652 Includes: 10mm 11mm 12mm 13mm 14mm  
15mm 16mm 17mm 18mm 19mm 21mm 22mm  
26mm 27mm  
P/N 12-01947.....

### 1/2" DRIVE DEEP 14 PIECE METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2653 Includes: 10mm 11mm 12mm 13mm 14mm  
15mm 16mm 17mm 18mm 19mm 21mm 22mm 26mm  
27mm  
P/N 12-01948.....

### 1/2" DRIVE DEEP SPINDLE NUT 4 PIECE METRIC IMPACT SOCKET SET



\* Deep design for GM & Chrysler spindle nut applica-  
tions  
\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2838 Includes: 30mm 32mm 34mm 36mm  
P/N 12-01951.....

### 1/2" DRIVE WHEEL LOCK REMOVAL KIT



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
2840 Includes: GM Hubcap Lock Remover, GM  
Sprocket Hubcap Remover, Ford & Chrysler Hub-  
cap Lock Remover, Large Univ. Locking Lug Nut  
Remover, Large Wheel Cover Lock Remover,  
Remover for Stripped 18mm Lug Nuts, Oversize  
Wheel Lock Remover, GM "M" & "F" Body Wheel  
Lock Remover, Lug Nut Remover Punch  
P/N 12-01952.....

### 3/8" DRIVE DEEP 25 PIECE SAE IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy molded storage tray  
3325 Includes: 12 Standard Sockets: 5/16" 3/8"  
7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8" 15/16"  
1"  
12 Deep Sockets: 5/16" 3/8" 7/16" 1/2" 9/16" 5/8"  
11/16" 3/4" 13/16" 7/8" 15/16" 1" P/N 12-01954.....

### 3/8" DRIVE MASTER 29 PIECE METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy duty blow mold case  
3329 Includes: 14 Standard Sockets: 8mm  
9mm 10mm 11mm 12mm 13mm 14mm 15mm  
16mm 17mm 18mm 19mm 21mm 22mm 14  
Deep Sockets: 8mm 9mm 10mm 11mm  
12mm 13mm 14mm 15mm 16mm 17mm  
18mm 19mm 21mm 22mm  
P/N 12-01955.....

### 3/8" DRIVE MASTER DEEP 28 PIECE SAE & METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed (excludign adapter)  
\* Heavy duty blow mold case  
3360DD Includes: 14 Deep SAE Sockets: 5/16"  
3/8" 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16"  
7/8" 15/16" 1" 14 Deep Metric Sockets: 8mm  
9mm 10mm 11mm 12mm 13mm 14mm 15mm  
16mm 17mm 18mm 19mm 21mm 22mm 1/2"  
(F) x 3/8"(M) Adapter 3" Extension  
P/N 12-01956.....

### 1/2" DRIVE DEEP MASTER 29 PIECE SAE & METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy duty blow mold case  
5153DD Includes: 13 Deep SAE Sockets:  
7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 13/16" 7/8"  
15/16" 1" 1-1/16" 1-1/8" 1-1/4" 14 Deep  
Metric Sockets: 10mm 11mm 12mm 13mm 14mm  
15mm 16mm 17mm 18mm 19mm 21mm  
22mm 26mm 27mm 2 Deep Flip Sockets: 3/4"  
x 13/16 19mm x 21mm  
P/N 12-01949.....

### 1/2" DRIVE MASTER 39 PIECE METRIC IMPACT SOCKET SET



\* CR-MO alloy steel for long life  
\* Fully guaranteed  
\* Heavy duty blow mold case  
2669 Includes 19 Standard Sockets: 9mm  
10mm 11mm 12mm 13mm 14mm 15mm  
16mm 17mm 18mm 19mm 20mm 21mm  
22mm 23mm 24mm 26mm 27mm 30mm 19  
Deep Sockets: 9mm 10mm 11mm 12mm  
13mm 14mm 15mm 16mm 17mm 18mm  
19mm 20mm 21mm 22mm 23mm 24mm 26mm 27mm 30mm  
P/N 12-01950.....

### 1/2" DRIVE EXTRA THIN WALL 9 PIECE SAE & METRIC WHEEL PROTECTOR IMPACT SOCKET SET



\* Durable outer sleeve and insert protects high  
polished wheels and lug nuts from damage  
\* Fully guaranteed  
\* Heavy duty blow mold case  
\* CR-MO alloy steel for long life  
2849 Includes 6 SAE Sockets: 3/4" (light  
green) 13/16" (purple) 7/8" (green) 15/16"  
(brown) 1" (silver) 1-1/16" (black) 3 Metric  
Sockets: 17mm (blue) 19mm (yellow) 21mm  
(red)  
P/N 12-01953.....

TO

# SUNEX TOOLS

## SUNEX WRENCH SETS

### 7 PIECE JUMBO SAE COMBINATION WRENCH SET



- \* High density, dropped forged alloy steel for strength
- \* Raised panel design
- \* Comes with sturdy metal clip for storage

9707 Includes: 942-1-5/16", 956-1-3/4", 944-1-3/8", 960-1-7/8", 948-1-1/2", 964-2", 952-1-5/8"  
P/N 12-01967 .....

### 14 PIECE SAE COMBINATION WRENCH SET



- \* Canvas pouch included
- \* Raised panel design
- \* High density, dropped forged alloy steel for strength

9714 Includes: 712-3/8", 726-13/16", 714-7/16", 728-7/8", 716-1/2", 730-15/16", 718-9/16", 732-1", 720-5/8", 734-1-1/16", 722-11/16", 736-1-1/8", 724-3/4", 740-1-1/4"  
P/N 12-01970 .....

### 14 PIECE ANGLE HEAD SAE WRENCH SET



- \* Canvas pouch included
- \* Fully polished drop forged alloy steel
- \* 15° and 60° angled ends for added convenience

9914 Includes: 991401-3/8", 991408-13/16", 991402-7/16", 991409-7/8", 991403-1/2", 991410-15/16", 991404-9/16", 991411-1", 991405-5/8", 991412-1-1/16", 991406-11/16", 991413-1-1/8", 991407-3/4", 991414-1-1/4"  
P/N 12-01975 .....

### 14 PIECE ANGLE HEAD METRIC WRENCH SET



- \* Canvas pouch included
- \* Fully polished drop forged alloy steel
- \* 15° and 60° angled ends for added convenience

9914M Includes: 991404M-6mm, 991408M-13mm, 991403M-7mm, 991409M-14mm, 991402M-8mm, 991410M-15mm, 991401M-9mm, 991411M-16mm, 991405M-10mm, 991412M-17mm, 991406M-11mm, 991413M-18mm, 991407M-12mm, 991414M-19mm  
P/N 12-01976 .....

### 8 PIECE FLARE NUT CROWFOOT WRENCH SET



- \* 3/8" Drive
- \* Fully polished drop forged alloy steel
- \* Mounted on a convenient storage rail

9708 Includes: 970802-3/8", 970810-5/8", 970804-7/16", 970812-11/16", 970806-1/2", 970814-3/4", 970807-9/16", 970818-7/8"  
P/N 12-01968 .....

### 7 PIECE JUMBO STRAIGHT CROWFOOT WRENCH SET



- \* Fully polished drop forged alloy steel
- \* 1/2" Drive
- \* Reusable blow mold storage tray

9720 Includes: 97732-1", 97734-1-1/16", 97736-1-1/8", 97738-1-3/16", 97740-1-1/4", 97760-1-3/8", 97744-1-1/2"  
P/N 12-01971 .....

### 6 PIECE JUMBO METRIC CROWFOOT WRENCH SET



- \* Fully polished drop forged alloy steel
- \* 1/2" Drive
- \* Reusable blow mold storage tray

9722 Includes: 97746-1-5/8", 97752-2", 97748-1-3/4", 97754-2-1/8", 97750-1-7/8", 97756-2-1/4"  
P/N 12-01972 .....

### 10 PIECE METRIC FLARE NUT CROWFOOT WRENCH SET



- \* Fully polished drop forged alloy steel
- \* 3/8" Drive
- \* Mounted on a convenient storage rail

9710M Includes: 971010-10mm, 971015-15mm, 971011-11mm, 971016-16mm, 971012-12mm, 971017-17mm, 971013-13mm, 971018-18mm, 971014-14mm, 971019-19mm  
P/N 12-01969 .....

### 8 PIECE JUMBO METRIC STRAIGHT CROWFOOT WRENCH SET



- \* Fully polished drop forged alloy steel
- \* Mounted on storage rail for convenience
- \* Reusable blow mold storage tray

9730 Includes: 97324-24mm, 97328-28mm, 97325-25mm, 97329-29mm, 97326-26mm, 97330-30mm, 97327-27mm, 97332-32mm  
P/N 12-01973 .....

## SUNEX TOOLS

### SX-225RA AIR DRILL

3/8" reversible. Muffled handle exhaust. Heavy-duty, industrial rated geared chuck.  
P/N SX225RA .....



### SX-232A ANGLE DIE GRINDER

1/4", right angle. Rear exhaust. Built in regulator lever throttle for positive speed control  
P/N SX232A .....



### SX-230A DIE GRINDER & ACCESSORIES

1/4" air die grinder. Built-in regulator. Exhaust directed away. Lever throttle for positive lever control.  
Die Grinder..... P/N 12-01124.....



### SX-229B AIR NIBBLER

Cuts metal without distortion up to 18 gauge. Lever throttle for easy operation. Compact design.  
P/N 12-01123 .....



### X-227B HEAVY DUTY METAL SHEARS

Muffled handle exhaust. Heavy-duty, ball and needle construction. Pneumatic.  
P/N 12-01122.....



TO

# SUNEX TOOLS

## SUNEX 20 TON CAPACITY AIR BOTTLE JACK



\* Designed for operating either manually or pneumatically \* Air hose can swivel in any direction \* Fitted with safety valve to prevent overloading \* Two piece handle allows for easy pumping \* Extension screw gives added height when necessary \* Minimum air pressure required is 90 PSI, 7 Bars \* Double spring return  
4920BAH Specifications: Capacity (Tons)-20, Power Lift (In.) -7, Closed Height (In.) -10.5, Raised Height (In.) -20.1, Add. Screw Adj. (In.)-3.5, Base P/N 12-01958 .....

Dimensions (In.)-6.5 x 8.9



## SUNEX C-CLAMPS

\*4\* \* Provides sure, non-slip clamping on all shapes \* Drop-forged steel for greater strength and durability \* Zinc-plated acme thread screw for accurate control  
P/N 12-01944 .....

## 4 PIECE 3/8 INCH DRIVE UNIVERSAL SPARK PLUG SOCKET SET



\* All four sized spark plug sockets in one convenient set \* Fully polished chrome vanadium alloy steel for durability \* Universal joint design for easy access in confined areas \* Rubber inserts hold spark plug securely during installation and removal \* Includes new 9/16" size \* Convenient blow mold case \* Fully guaranteed  
87602 Specifications: 8844-9/16, 8844-5/8, 8844-3/4, 8844-13/16  
P/N 12-01966 .....

## 8 PIECE PROFESSIONAL SCREWDRIVER SET - ORANGE



\* Includes 5 flat tip drivers and 3 Phillips tip drivers \* Hardened chrome vanadium shafts \* Vapor blasted magnetic tips \* Packaged in heavy molded plastic tray for storage \* Hex bolsters on most sizes for extra turning power  
87602 Specifications: 98061-3/8" x 8", 98062-5/16" x 6, 98063-1/4" x 4", 98064-3/16" x 3", 98065-1/4" x 1-1/2", 98066-#2 Phillips x 4", 98067-#1 Phillips x 3", 98068-#2 Phillips x 1-1/2" P/N 12-01974 .....

## SUNEX DELUXE CREEPER



\* 1" Rugged steel tube construction \* Oversize frame for added comfort \* Tapered frame and head rest for extra clearnace in tight areas \* 3-1/2" Heavy duty chrome finished casters with rubber tread \* 5-Position stick shift headrest adjustment sytem \* Rear drop frame design for extra leg comfort

8515 Specifications: Length (In.)-45.5, Width (In.)-19, Height (Headrest Down)-5, Height (Headrest Up)-9.5, Shipping Weight (lbs)-29.0, Bed Size-30.625 x 16.5 x 2.5  
P/N 12-01964 .....

## SUNEX SERVICE CART WITH LOCKING TOP & DRAWER



\* 8016 - 3 Drawer Unit \* 8011 - Large Locking Screwdriver/Pry Bar holder \* 8004 - Side Work Bench \* 8014 - Leg extension Drawer liner sold separately Note: This item is purchased as a complete unit with the accessories listed above.  
8013ADLX Specifications: Load capacity (lbs.)-350, Shipping weight (lbs.)-115.5, Color: Blue-8013ABLDLX, 8844-13/16-13/16"  
P/N 12-01962 .....

## SUNEX SERVICE CART WITH LOCKING TOP & DRAWER



\* This combination makes for the ultimate cart \* The locking drawer and locking top are keyed the same, so the user only has one set of keys \* Clip-on roller-bearing slides on drawer \* Large, easy to maneuver 4" wheels: 2 locking and 2 standard, Chrome 16 gauge steel frame, Durable powder coated finish, 3" deep shelves, Available colors: red, blue, black & yellow  
8013A Specifications: Load capacity (lbs.)-350, Shipping weight (lbs.)-69.5  
P/N 12-01963 .....



## SUNEX 6 INCH VISE

\* 2 locking mechanism for stability \* Made from cast iron with steel handle threads  
87602 Specifications: Base Swivel- 360 deg.  
P/N 12-01961 .....



## SUNEX 3/8 INCH CUTTING WHEEL - 5 PCS.

\* For general purpose metal cutting 3" x 1-1/16" double reinforced \* Use with 3/8" arbor \* Do not exceed 20,000 RPMs \* Comply with ANSI B7.1/OSHA regulations  
87602 Specifications: Diameter (In.)-3, Qty. Included -5, Max RPM -25,000  
P/N 12-01965 .....

## 6 INCH BENCH GRINDER WITH LIGHT



\* Bright, flexible work light \* Has two 6" grit wheels: coarse 36 and medium 60 \* Each wheel has protective spark guard and adjustable eye shield \* Mounting holes and rubber feet make grinder easy to mount on a stand (optional - part #5003 or 5005) or use on an approved worktable or workbench \* Conveniently placed, easy to use on/off switch \* Long, 6-foot power cord \* Cast iron base for durability \* Ball bearing construction for smooth operation \* 1/2" Arbor accepts standard 6" wheel \* UL & CSA Listed \* Includes: eye shields (RS500119B) & tool rests (RS500135B)

5001A Specifications: Power-1/2 HP Motor, No Load speed .3450 RPM Motor -3.5 Amp, Voltage -115V/60Hz, Shipping Wt. (Lbs) -22  
P/N 12-01959 .....



## 5 TON CAPACITY 8-WAY, 2-3 JAW REVERSIBLE PULLER

\* Can be assembled to make a two or three jaw puller when additional stability is needed \* Reversible jaw design for added versatility and a broader range of pulling capability \* Ideal for pulling gears, bearings, pulleys and other press fit parts  
3908 Specifications: Maximum reach (in.)-5.5, Maximum spread (in.) -7  
P/N 12-01957 .....



## 3/16 INCH HEAVY DUTY RIVET GUN

\* Sets all conventional, standard blind rivets and all structural blind rivets, mono bolts and t-rivets up to and including 3/16" diameter in all materials \* Comes with nose pieces in 3/32", 1/8", 5/32", and 3/16" sizes \* Features a pulling (traction) power of 1,983 lbf @90PSI \* Forged aluminum handle \* Nose pieces stored conveniently underneath base of gun \* Minimum air pressure required is 90 PSI, 7 Bars \* Includes blow molded storage case  
SX0918T Specifications: Air Pressure (PSI) -75-90, Stroke Length (In.) -11/16, Height (In.) -12-3/8, Weight (Lbs.) -3.70, Min. Hose Size (I.D.) -3/8, Air Inlet Size (NPT) -1/4  
P/N 12-01933 .....

TO

# AN WRENCHES - DIGITAL THERMOMETERS

## SOFTORQ CARBON FIBER AN WRENCHES



SofTorq currently offers the following patented scratch-resistant product: \* Designed to meet the torque requirements for fastening your aluminum anodized hydraulic A/N fittings \* Made from a special formulation of fiberglass layered with carbon fiber for strength and durability \* Comes in SAE, Metric, and AN sizes \* Designed, Assembled, and Made in the U.S.A. \* Patented in design

Benefits: \* Will not severely scratch the specialty coating or damage aluminum anodized hydraulic A/N fitting like metal AN wrenches would when the tools are used for its intended purposes. \* Scratched or damaged fittings lead to the dangers of corrosion and reduced product life \* Reduce flight weight when carried on-board aircraft

### INDIVIDUAL

Mfg. P/N	Size	Part Number	Price
AN4	9/16	12-02039	.
AN6	11/16	12-02040	.
AN8	7/8	12-02041	.
AN10	1"	12-02042	.
AN12	1-1/4"	12-02043	.
AN16	1-1/2"	12-02044	.

### SET

Mfg. P/N	Part Number	Price
AN4 to AN16	12-02045	.
AN6 to AN16	12-02046	.



## HANDHELD ANTI-ICING AND DEICING SPRAYERS

Handheld Deicing Sprayers are aircraft-portable pressure sprayers appropriate for defrosting and light deicing operations. They are commercial grade, polyurethane, controlled-pressure sprayers designed to spray hot SAE Type I deicing fluid directly on your aircraft to remove frost, and light snow & ice. They are equipped with a 2 piece brass wand, flat-fan spray pattern, high-capacity, interchangeable nozzle tip that sprays 1.2 gpm of deicing fluid at 20 psi. They will also accept our optional 120-volt, 1100 to 1700 watt electrical immersion heaters to quickly heat the fluid within the sprayer tank to 160

Description	Dimensions	Part No.	Price
1 Gal Sprayer	7" Dia. x 17" H	12-21605	.
2 Gal Sprayer	8.5" Dia. x 19.5" H	12-21610	.
3 Gal Sprayer	9.5" Dia. x 21" H	12-00499	.

To heat Deicing fluid you need to purchase a heater below.

Heaters					
Voltage	Watts	Amps	Application	Part No.	Price
120	1,100	9.2	12-21605 Sprayer	12-02087	.
120	1,400	11.7	12-21610 Sprayer	12-02088	.
120	1,700	14.2	12-00499 Sprayer	12-02089	.

## DEICING CARTS

Powered Deicing Carts are designed specifically for FBO, Air Charter, Corporate, Cargo, and Flight School operations for all general aviation aircraft. They will quickly and efficiently spray aircraft ground deicing or anti-icing fluid on your aircraft prior to takeoff. These portable, 3-wheeled carts are powered by either a small gasoline engine or a 12-volt electric pump. While both types will spray deicing or anti-icing fluid, they each have different characteristics which make them more appropriate for one type of fluid over the other.

Gas powered engines			
Description	Part No.	Price	
40 Gallon 3.5 Hp gas Engine with 2500 watt heater and pintel ring.	12-02083	.	
60 Gallon 3.5 HP gas engine with 2500 watt heater and pintel ring.	12-02084	.	
Electric powered engine			
Description	Part No.	Price	
25 Gallon 12 volt Electric Cart with self Containment kit and pintel ring.	12-02085	.	
60 Gallon 12 volt Electric Cart with self Containment kit and pintel ring.	12-02086	.	

## MICROTEMP DIGITAL INFRARED THERMOMETERS



Digital, non-contact infrared thermometers are used for hundreds of practical applications and are essential tools for professional automotive and aviation technicians.

Infrared Thermometers (IRTs) are great automotive and race tuning diagnostic tools-and are great for countless diagnostic tasks. Check track surface temperatures, tire temps, brake rotors, header and exhaust temps, air intake temp, heating and A/C vents. Think you have a leaky window? Find the link with a Microtemp IRT.

Applications:

- Engine Block Temperature
- Compressors and Turbochargers
- Any Cylinders Misfiring
- Batteries and Electrical Connections
- Cooling System Diagnostic
- Heating & AC System / Vent Testing
- Engine Diagnostics
- Brake Diagnostics (Rotor Temp)
- Window Defrosters
- Alignment (Test Tire Temp)
- Bearing Temp
- Exhaust and Catalytic Converters
- All Cylinders Running At Same Temp?

Model	Description	Part No.	Price
MT-002	Temp Range: -27F - 428F (-33C - 220C); Compact Pocket Size, Metal Case	12-01656	.
MT-EXP	Temp Range: -58F - 752F (-50C - 400C); Laser Target, Pistol Grip	12-01657	.
MT-100	Temp Range: -27°F - 230°F; Distance to Spot Ratio (D:S) 1:1, Accuracy +/-2°F, Response Time: 1 Second, Dimensions: .75" x 3.25". Battery Type 2 LR44	12-01994	.



## WIDE RANGE DUAL PORT DIGITAL THERMOMETER

Jumbo Display with four digit LCD, Dual Channel K type ports T1/T2, Accepts K/J thermocouples, Fast response, Hi/Lo temperature alarm, Temperature hold, Instrument displays in °F/°C/Kelvin- absolute temperature

### Features

- Jumbo Display with four digit LCD
- Dual Channel K type ports T1/T2
- Accepts K/J thermocouples
- Fast response
- Hi/Lo temperature alarm
- Temperature hold
- Min./Max./Avg.
- Clock setting
- Relative temperature mode
- Low Battery and Overload indicators
- Auto Power off
- Protective rubber housing
- Instrument displays in °F/°C/Kelvin- absolute temperature

### Specifications

- Temp/ range: "K" -148°F to 2372°F, "J" range -148° to 1832°F
- Temperature Accuracy: ± 0.1% + 1°F
- Temperature Resolution: 0.1° up to 99.9° and 1° thereafter
- Sampling rate: 1 second
- Battery Life: 550 hours
- Operating Conditions: 32° to 122°F, 0-80% RH
- Storage Conditions: -4° to 140°F, 0-80% RH
- Weight: 415 grams with batteries
- Dimensions: 164 x 76 x 32mm
- Four AAA 1.5V Batteries

P/N 12-01893 .....

TO

# ENGINE TOOLS



## VALVE WOBBLE TEST FIXTURE

The Valve Wobble Test Fixture for parallel valve Lycoming engines is used to comply with Lycoming SB-388a. Quality made of aluminum and alloy steel, it is easy to use with no set screws or feeler gauges required. Allows direct reading of wobble from dial indicator. Note: Will work on an angle valve engine.

Fixture without indicator P/N 12-21500 .....  
 Fixture with indicator P/N 12-21505 .....



## DISTRIBUTOR BLOCK SPRING INSTALLATION TOOL

This tool facilitates the proper installation of contact springs on Bendix magnetos. The O-ring locator ring assures proper location of the tool in the contact tower. Features knurled body grip and ball plunger grip. Made of alloy steel.

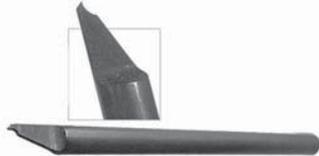
P/N 12-21510 .....



## VALVE SPRING COMPRESSOR

This tool is used to compress valve springs during valve removal and installation. It is ergonomically designed for shop and field use and comes with special pivot pin. Features alloy steel construction with nickel plating.

P/N 12-00202 .....



## ELECTRODE SPREADING TOOL

This tool is used to increase the electrode gap on all massive electrode spark plugs. It is constructed from heat treated alloy steel and is nickel plated.

P/N 12-51520 .....



## SPARK PLUG SERVICE KIT

Our spark plug service kit includes the Precision Gap gapping tool which is easy to use, features fine thread adjuster and ball pressure tips, and works on all massive electrode plugs. Also includes the 18mm Thread Cleanout Tool with spring loaded jaws which offer maximum thread penetration & control carbon build-up in threads. Completing the Kit is a double-end Gap Plug Gauge which features an aluminum handle and is easy to use. Kit comes complete with durable birchwood storage case.

P/N 12-21525 .....



## THROTTLE SHAFT BUTTERFLY SCREW STAKING TOOL

This quality made alloy steel tool facilitates the proper staking of throttle shaft butterfly screws and eliminates the possibility of damaging the carburetor during staking. The tool can easily be operated by one person on the bench without chisels, special fixturing or hammers. All wear components are easily replaceable for long service life.

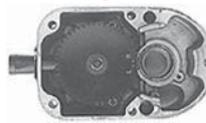
P/N 12-21528 ...../ea.



## BENDIX MAG LOCK

This Bendix Mag Lock works on S4 and S6 and other Bendix Mags. To use simply place a cotter pin loosely into lower plunger hole. Screw sleeve into magneto case. Align red slot in plunger parallel to mag tooth gear. Remove cotter pin to engage gear tooth. Dimension: 2-3/4" x 1/2" x 3/4"

P/N 12-02243 .....



## SAFETY MAGNETO LOCK TOOL

This handy tool fits most Bendix magnetos and prevents damage to distributor gear teeth brought about by accidental turning of the engine during magneto installation. Use for E gap or engine timing. Body taper locks into timing window. Polyurethane rubber throughout.

P/N 12-21535 .....



## LYCOMING TIMING POINTER

This tool is used to align timing numbers and marks to the crankcase parting line on Lycoming engines. It permits timing from the marks on the aft side of the flywheel. A spring clip holds the tool to the flywheel.

P/N 12-21540 .....



## CONTINENTAL O-200 TIMING POINTER

This tool is used to align timing numbers and marks to the crankcase parting line on the Continental O-200 engine. It is held to the propeller flange with magnets, and eliminates the need for all other timing angle devices and TDC indicators. Quality made from delrin and tool steel. Greatly simplifies the timing of new magnetos and periodic timing checks.

P/N 12-21545 .....



## SIDEWINDER SPEED WRENCH

The Sidewinder Speedwrench specialty tool was developed to counter the frustrations of using standard socket wrenches especially in applications where excessive repetitions are required to install or remove long bolts; or where there is not enough resistance involved to allow the ratchet to function; or where there is not enough working space for efficient use of the standard ratchet wrench. The sidewinder can cut work time in half for professional mechanics and aircraft builders. Now being used by major racing teams, the Sidewinder is a revolutionary addition to every tool box.

1/4" .....P/N 12-21109 .....  
 3/8" .....P/N 12-21100 .....  
 1/2" .....P/N 12-21110 .....



## ENGINE OVERHAUL STAND

This inexpensive engine overhaul stand is ideal for actual overhaul and for storage of engines. Constructed of heavy duty steel, it features three legs which allow it to sit level on uneven floors and comes complete with an adapter spacer block. The stand is 24" tall with made for user installed casters and comes predrilled for Continental A-65 through O-520 series engines and Lycoming 65 through O-720 engines. A quality engine stand at an affordable price.

P/N 12-21555 .....



## ENGINE OVERHAUL STAND KIT

The engine stand kit has all of the components to construct an engine stand. Beginning at the top; the engine stand kit includes (1) The top plate. Designed to bolt down the engine flange to the stand. (2) Three legs that are pre-cut to the proper angle. (3) Three spreader bars to hold the base of the stand from spreading apart. (4) Three feet to stabilize the base and allow installation of casters. The kit is ready to weld. 24" tall when finished..

P/N 12-01364 .....



## TWISTER DAMAGED NUT & BOLT REMOVERS

These handy Twister tools work with a socket or wrench and removes nuts regardless of the stud length. No chisels, hammers, drilling, or torches are required. No more busted knuckles! The flush face design allows the remover to grip on the smallest of surfaces, and only 3/4" of working space is required. The same set works on both standard and metric damaged bolts and nuts as well as on collar and flange nuts. Deep Socket. Made from high quality tool steel.

Part No.	Nut or Bolt Size	Price
12-00152	7/16" or 10 mm	.

TO

# TOOLS

## LYCOMING BAFFLE SPRING COMPRESSOR



Our top quality Lycoming Baffle Spring Compressor speeds up the removal & installation of cylinder baffle springs. It eliminates the danger of broken or bent cylinder fins caused by use of screwdrivers and punches. This tool is easy to use and features 2 pivot locations for parallel and angle valve cylinders.

P/N 12-30200 .....

## VALVE SPRING COMPRESSOR TOOL



This unit will work on Continental 65 thru 0300, and some 0-470's. Lycoming 0320 & 0360, and most any cylinder with a vertical valve constructed head.

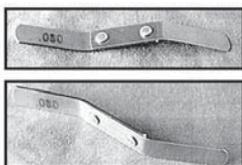
It is extremely simple to use. Place Spring Compressor in drill press, and a length of wood in cylinder (to keep valve seated). Depress and remove valve stem clips, and spring. Removes valves in a minute. P/N 12-02072 .....

## LYCOMING VALVE SPRING COMPRESSOR



This cast aluminum alloy valve spring compressor fits Lycoming parallel valve and angle valve horizontally opposed engines. An excellent tool at an economical price. P/N 12-21520 .....

## LYCOMING TAPPET GAUGE



Similar to Lycoming Gauge ST23, this tappet gauge is Rockwell hardened to 48-52 and precision ground to .028 and .080. This gauge is a must for professional aircraft mechanics.

P/N 12-00918 .....

## EAR ISLAND REMOVAL TOOL



When substantial quantities of material have to be removed from the exhaust port, it may be necessary to also remove the island around the exhaust stud area. The ear island removal tool and pilot can be used to accomplish this without the use of power tools.

P/N 12-17608 .....

## ECONOMIZER VALVE SETTING TOOL



The economizer valve adjusting tool is a simple, functional gage that eliminates the hassle of using a depth mic. The tool is precision made to assure required accuracy.

P/N 12-17500 .....

## DRILL PILOT SLEEVE & BOLT HOLE BULLET

### DRILL PILOT SLEEVE



- Great for getting drill point centered, for drilling off rivet heads. Eliminates scoring of material and paint. Set of 3 (3/32, 1/8, & 5/32) Used with #40, 30, & 20 Drill Bit

P/N 12-02092 .....



**BOLT HOLE BULLET** - Every tool box should have a set. Simply tap bullet into bolt hole requiring alignment, and tap bullet on through with proper AN Bolt Set of 3 (1/4, 5/16, 3/8 7/16 and 1/2inch)

P/N 12-02093 .....

## LINK® TOOLS LOCKING SOCKET SETS



### 7-PC LINK 1/4 & 3/8 INCH PROFESSIONAL UPGRADE AND DELUXE PROFESSIONAL SET

LINK Tools are available as professional upgrade sets for customers that wish to upgrade their tool chests with just a few LINK Tools. Additionally, a variety of sets with sockets and bits are available in convenient mobile cases. Adding a few LINK Tools upgrades your entire tool chest! The revolutionary LINK Tools are forged from solid steel, with a distinctive chrome finish for outstanding durability and strength. LINK Professional Upgrade Sets are available and work with all detent sockets. Increase the productivity of every tool in your chest! **Comes with:** Locking Ratchet • Locking Unidriver® tool • Locking U-Joint • Locking Palm Wrench • 2" Locking Extendor™ Bar • 3" Locking Extendor™ Bar (1/4" Drive Only) • 6" Locking Extendor™ Bar • 9" Locking Extendor™ Bar \*available in deluxe set with Ratcheting Unidriver

Description	Part No.	Price
3/8" (38007) Up-grade Set	12-01702	.
3/8" (38009) (with Ratcheting Unidriver) Deluxe Up-grade Set	12-01703	.
1/4" (25007) Up-grade Set	12-01704	.
1/4" (25009) (with Ratcheting Unidriver) Deluxe Up-grade Set	12-01705	.
Electric Tool Adapter 3"L	12-01706	.



### 41-PC. LINK® 3/8" DRIVE SYSTEM SET

- The revolutionary 3/8" Drive LINK® System tools are forged from solid steel, with a distinctive chrome finish. The set includes: [1] Universal Joint, [1] Unique UniDriver™ Drive, [1] LINK Automatic-Locking Ratchet, [2] Extensors™ (2 and 6-inch), [2] Spark Plug Sockets (5/8 and 13/16-inch), [9] SAE 6-Point Sockets (5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, and 13/16-inch), [11] Metric 6 Point Sockets (8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18-mm), [5] Socket Mounted Hex Bits (3/16, 5/16, and 3/8-inch, and 6 and 10-mm), [5] Socket Mounted Torx or Star Bits (T- 25, T-30, T40, T45, and T-50), [4] Socket Mounted Screwdriver Bits (5-mm slotted, 9/3" slotted, #1 Phillips and #2 Phillips), and a Case.

P/N 12-00807 .....



### 41-PC. LINK® 1/4" DRIVE SYSTEM SET

- LINK® extensions and sockets will not pull apart until you unlock them. A small pull on the locking device lets the socket or extension fall free. The new 1/4" Drive Quick-Lock™ Set comes with 12 pt. sockets in a new custom-fitted carrying case that floats and contains storage space. The set includes the following 6 Link-Lock™ Drive Tools: [1] Universal joint, [1] All-metal UniDriver® [1] 36-tooth Slide Button Quick Release Positive Locking Ratchet, [3] Extendor™ Extensions (1.5, 3, 6-inch); 16 12-point Sockets: [8] SAE (5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, and 3/8 inch), and [8] Metric (4, 5, 6, 7, 8, 9, 10, 11 mm); 19 dingle piece machined steel socket bits: [6] Torx (T-8, T-10, T-15, T-20, T-25, T-27), [9] Hex (5/32, 3/16, 7/32, and 1/4 inch, 3, 4, 5, 6, and 7mm), [4] Screwdriver (#0 and #1 Phillips, 5.5 and 6.5 mm slotted); and a custom-fitted Case with storage space. P/N 12-02840 .....



### LINK® TOOLS PALM WRENCH & SPEEDER

- LINK® extensions and sockets will not pull apart until you unlock them. A small pull on the locking device lets the socket or extension fall free. The locking device is similar to those found on air hose co plings, but is a lot easier to lock and unlock. Hand spin, then attach your ratchet to torque down. Not with old fashioned ball bearings, but a space age case-hardened nickel plated steel pin. Or, leave the Palm Wrench on your ratchet and use it as a handy spinner! Exceeds 130% of ANSI standards.

2" Palm Wrench/Speeder 3/8-in.Drive ..... P/N 12-00808 .....

1-1/2" Palm Wrench/Speeder 1/4" Drive ..... P/N 12-00809 .....



### LINK® BRACE STYLE SPEEDER 16.5 INCH

- Just the accessory for tight places where there's not much room to turn. Hand spin, then attach your ratchet to torque down. Made of aluminum and steel. Highly polished and nickel chrome-plated for durability, rust resistance, and beauty. Exceeds 130% of ANSI standards. 1/4" Drive, 16.5" Speeder #25557.

P/N 12-01701 .....



### LINK® 1/4" DR. LOCKING ELECTRIC-TOOL ADAPTER

- For use with your battery-operated electric drill or screwdriver to always get secure locking and quick speed on your sockets and attachments. One end goes into the chuck of your power tool and the other clicks into a socket, socket-mounted accessory, or other LINK drive tool with the same Quick-Lock technology that gives you Hand-To-Work locking.

P/N 12-00933 .....

TO

# ENGINE TOOLS

## PRECISE-GAP SPARK PLUG GAPPING TOOL



Precise Gap is a simple tool to gap two-, three- or four electrode 18 mm sparkplugs. Only 2" overall - comfortably handheld. Precision made of stainless steel. "T" handle adjusters move the ground electrodes closer to the center electrode until wire feeler identifies proper gap. Adjusters have

fine thread with ball tips for precise movement. Don't buy an inferior imitation at a higher price! P/N 12-11600 .....

## .016 NOMINAL GAP PLUG GAUGE



Many customers have indicated that they have had difficulty obtaining setting wires for gaging the plug gap. We now provide a handy tool at reasonable cost. No need to buy extra gauge sizes that you don't need. Furnished with protective end caps. P/N 12-17100.....

## THREAD CLEANOUT TOOL



In servicing spark plugs, a common problem is carbon accumulation in the jug threads. Cleaning these threads regularly can save big money by preventing thread damage and the need to pull the jug and install thread inserts. This specially designed tool works very well to limit this problem. It provides maximum depth penetration and its unique spring action assures that there will be no enlargement of the existing thread pitch diameter. P/N 12-17200 .....

## COMPASS ADJUSTING TOOL



The compass screwdriver is a great little tool that is totally non-magnetic, but also overcomes the shortcomings of solid brass or aluminum tools. This tool has a nice hex aluminum handle and a stainless steel driver insert. No need to worry about damaging the tip on a frozen compensator screw, and you can also remove the cover plate screws with the same tool. P/N 12-17300 .....

## THROTTLE SHAFTBUSHING KNOCKOUT



The throttle shaft bushing removal tool is very competitively priced and will help you avoid a jury-rigged operation that could damage an expensive carburetor body. Now there is no reason not to have one. They are available and affordable. P/N 12-17400 .....

## SPRING TOOL



Get a handle on those springs! The "C" shaped tip fit the bend in spring end and won't slip. Can be used to install and remove springs on anything! P/N 12-16945 .....

## TEMPEST AA473 OIL DRAIN TOOL



Tired of messy oil filter changes? Tempest oil drain tool with a twist of the knob drills a hole in the filter and allows the oil to drain out of the filter into your container. No mess, easy to do and inexpensive. P/N 12-02248 .....

## S4-1 RACE REMOVAL TOOL



A & P mechanics will find this S4 outer bearing race removal tool to be very effective and well priced. Hemispheres held together by the "O" ring are inserted together behind the bearing race. The pilot is then inserted to expand and lock the halves & push out the race. You'll like its simplicity and ease of use. P/N 12-17601 .....

## S4-2 RACE REMOVAL TOOL



The S4 magneto drive end inner race removal tool works in conjunction with a standard bearing puller. The split gripper ring fits behind and around the race and is captured in the puller ring by 2 opposing set screws. A groove on the puller ring provides the point of attachment for the puller arms. P/N 12-17602.....

## S4-3 RACE REMOVAL TOOL



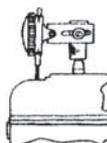
The S4 magneto seal installation, inner and outer race installation tool is three tools in one and is proportioned in such a way that it is easily accommodated by most small bench arbor presses. P/N 12-17603 .....

## TIMING JUMPERS



The timing jumpers are easily used for timing magnetos without removing the breaker box cover. Simply remove the "P" lead and replace with timing jumper. Then hook up timing light leads. These handy devices have proven to be a real time saver and, in some cases, an outright necessity. **SOLD IN PAIRS**  
Bendix S4..... P/N 12-17700..... /pr.  
Bendix D2200, D3000, D3200, S6  
P/N 12-17710..... /pr.

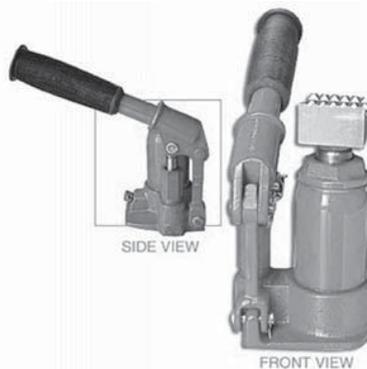
## MAGNETO ROTOR BEARING SETTING GAUGE



Determines condition of excess bearing clearance and allows for precise adjustment of new bearings to prevent over or under preload. Available with or without dial indicator. Choice of 3/8-16 or 3/8- 24 threaded shaft fittings.

Kit Description	Thread	Part No.	Price
Setting Gauge & Ind.	3/8-16	12-17801	.
Setting Gauge & Ind.	3/8-24	12-17802	.
Setting Gauge & Ind.	Both	12-17803	.
Setting Gauge, No Ind.	3/8-16	12-17901	.
Setting Gauge, No Ind.	3/8-24	12-17902	.
Setting Gauge, No Ind.	Both	12-17903	.

## STRUT LIFT JACK



In many instances, simple tire changing, bearing packing, etc., can be a real problem unless the wheel can be lifted in a safe, secure manner. The strut lift shown accomplishes this easily. A specially designed lift pad securely captures the strut elbow or gear leg. The compact jack can be stored in your toolbox. P/N 12-18000 .....

TO

# ENGINE TOOLS

## PISTON RING COMPRESSOR SET



The most efficient, versatile and dependable tool of its kind on the market. Designed to operate both vertically and horizontally. Fine-tooth ratcheting lock permits bands to be contracted in extremely small increments. Positive lock insures a free hand. Eliminates broken rings during installation. Set includes compressor pliers and the two bands (1123, 1125).

P/N	Size	Engine Application
1123	3-7/8" to 4-1/8"	Cont. A-65, C-85, C-90, 0-200, 0-300
1125	4-3/8" to 4-5/8"	Cont. E-225, IO-470

Set ..... P/N 12-10900 .....  
 Pliers ..... P/N 1114 .....  
 Individual band # 1123 ..... P/N 1123 .....  
 Individual Band # 1125 ..... P/N 1125 .....



## PISTON RING FILER

A portable rotary filer. Sizes any make, type, size of ring with machine shop accuracy. Turning crank files both ends at the same time.

P/N 12-11000 .....  
 Replacement Cutter File  
 P/N 12-11100 .....



## CYLINDER BASE NUT WRENCHES (CONTINENTAL)

Made of top quality tool steel. 12 Point with 1/2" square drive, 13" long. Set of 4 ..... P/N 12-11200 .....  
**or order individual wrenches below.**

## LYCOMING & CONTINENTAL CYLINDER BASE NUT WRENCHES

Wrench Part #	Size	Engine Application	Price
2882	9/16" Hex	C-85, 0-200, 0-300, G0-300, E-185, E-225, 0 & IO-470, IO-360, IO-520	.
2882-2	1/2" Hex	A-65, C-85, 0-200, 0-300, G0-300, E-185, E-225, IO-360	.
2882-3	5/8" Hex	A-65, 0-470, IO-520	.
2882-4	3/4" Hex	No longer used on Cont.; Used on Lyc. 0-390D, D2 and all wide deck Lyc engines	.

## CYLINDER BASE NUT WRENCHES



1/2" Allen Head Hex...P/N 64942 .....  
 3/8" Allen Head Hex...P/N 64943 .....

**FOR ECONOMY WRENCHES SEE PAGE 613**

## ATS SPARK PLUG GAPPER



Sure-Gap is designed for use on all massive electrode aircraft spark plugs. Saves time and money, eliminates guessing of plug gap, prolongs plug life and ensures peak performance. 18mm. 1lbs shipping weight.

P/N 12-01682.....

## ATS SPARK PLUG GAP GAUGE



Convenient Gap Gauge for all Champion and Autolite massive electrode spark plugs. Slider design keep gauge wires stowed away when not in use.

• Retractable slider design

- Includes wires for .015", .019", .018", and .022"
- Works with all Champion and AutoLite Massive Electrode Spark Plugs
- Replacement Wire Gauges are available. 1lbs shipping weight.

P/N 12-01692.....

## ATS SPARK PLUG GAPPER & GAUGE 415K



A low-cost efficient gap setting tool for closing gaps on massive-electrode Aviation Spark Plugs. Great design allows it to clamp on to your workbench for easy gapping. Features

• Manufactured from 4160 Tool Grade Steel

- CNC Machined surfaces for exact alignment
- Includes ATS450 Feeler Gauge
- Clamps to workbench for easy one-handed operation
- Compatible with all Champion, and AutoLite Massive Electrode Spark Plugs
- 2lbs shipping weight.

P/N 12-01691 .....

## ATS SPARK PLUG THREAD CHASER



Chaser cleans threads in spark plug hole of dirt, carbon build-up, and metal particles. Double ended for both 14mm and 18mm threads. Neoprene band on hex drive holds tool securely in any 13/16" deep-well spark plug socket. 1lbs shipping weight.

P/N 12-01683 .....

## ATS MAGNETIC SPARK PLUG SOCKET



The new Spark Plug Socket features a thin-walled design to get into the tightest confines. Magnetic interior guarantees that you won't accidentally drop the plug during installation or removal. Works with all Champion and Autolite Aviation Spark Plugs.

- Works with all Champion and Autolite Aviation massive electrode Spark Plugs
- Thin-Walled design to get to the tightly spaced plugs.
- Magnetic interior holds spark plugs and keeps them from falling out
- 7/8" Socket
- 3/8" Drive
- 3-1/2" Overall Length
- Made of Chrome Vanadium Steel
- 1lbs shipping weight.

P/N 12-01693.....

## ATS SPARK PLUG CLEANER



Cleans any size plug without changing grommet. Has 2-way valve (blast or air) and comes complete with abrasive powder. Ready to use.

P/N 12-01684.....

## AIRCRAFT SPRUCE PLUG MAINTENANCE KIT



The Aircraft Spark Plug Maintenance Kit includes an aircraft spark plug tray, air-powered spark plug cleaner, feeler gauge, spark plug gap setting tool, aircraft spark plug socket, a set of 8 spark plug

gaskets and a bottle of spark plug thread lubricant and anti-seize compound.

Kit Includes:		
Qty.	Description	Part No.
1	A/C ASSEMBLY SCRAPER KIT	12-00977
1	SPRK PLG CLEANER ATS12	12-01684
1	ATS PLUG GAPPER ATS116	12-01682
1	ATS SPRK PLG GAP GAUGE ATS450	12-01692
1	ATS MAG SPRK PLG SOCKET ATS950	12-01693
8	CPR SPRK PLG GKT M674 AN4027-1	07-00877
1	CHAMP ANTI-SIEZE 4OZ 2612 S	2612

P/N 12-02250.....

TO

# SPARK PLUG & FILTER TOOLS

## CT-415AV GAP SETTING TOOL



A low-cost efficient gap setting tool for closing gaps on massive electrode type aviation spark plugs. May be used as a hand tool, mounted on a bench or held in a vise. Furnished with one adapter for 18mm spark plugs. (P/N GT-204) and one CT-450 gap gauge. Wt. 1-1/2 lbs., 7-1/2" high.  
P/N 12-00796.....

## CT-450 RETRACTABLE GAP GAUGE



High-impact red plastic case contains four sets of accurate, retractable "go" and "no go" wire gauges: 2 sets .015-.019 (.016 Nom.) 2 sets .018-.022 (.019 Nom.) Length: 3-1/2". Wt. 1-1/4 oz  
P/N 12-00797.....

## CT-457 FINE WIRE GAP SETTING TOOL



Designed exclusively for adjusting fine wire electrode sparkplug gap. Two sizes of slots fit all platinum or iridium electrodes for quick adjustment. Red plastic case.  
P/N 12-00798.....

## LEAD-MASTER WRENCH SETS



Reduce time to remove and install sparkplug ignition leads. Permit shortarc turning due to 12-point grip head.

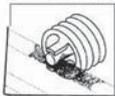
- CT911 3/4" "T" Handle Box Wrench ..... P/N12-00799.....
- CT912 7/8" "T" Handle Box Wrench ..... P/N12-00801.....
- 3/4" & 7/8" Open End Box..... P/N12-00802.....

## CT-907 "PLUG-MATE" MAGNETIC SPARK PLUG SOCKET



A companion tool to the "Plug-Master" and other 3/8" square drive wrenches. Built-in magnet holds plugs. Chrome plated. 3-1/2" long, 7/8" deep hex socket. Wt. 8-1/2 oz.  
P/N 12-00804.....

## SCREEN CLEAN SPARK PLUG CLEANER



The new Screen Clean tool works great for field cleaning of spark plugs. It is non-abrasive and can be used for several cleanings. Simple to use—just work the bi-fold edge through the gap with several strokes before setting the gap. Actually removes deposits blasting cannot reach.  
P/N 12-15610.....

## SPARK PLUG TRAY



This unique spark plug tray is quality made of PVC plastic. Each holding position has 18 mm thread so that plugs screw in for positive holding. This tray permits simultaneous inspection of either the electrode or barrel end of plugs, protects plugs from damage, and can be stored in any position. Optional carrying strap attaches to ends.  
P/N 12-30185.....

## PLUG-A-LONG SPARK PLUG TRAY



Holds 12 spark plugs each hole stamped with cylinder number also marked top and bottom so each plug can be identified easily, no mix-ups. Plugs can be serviced and returned back to where they were removed, a must for aircraft mechanics. Made from 18 gauge steel. Blue powder coat finish. Dimensions: W=4.0", L=8.0", H=2.6.  
P/N 12-00974.....

## ECONOMY SPARK PLUG GAPPING TOOL



This handy spark plug gapping tool is made from heat treated stainless steel for long life. To adjust the spark plug gap, simply place the tool into plug with ground electrode between the forks, push up on the tool bending the ground electrode closer to the center electrode setting nominal gap of .016".  
P/N 12-21352.....

## OIL FILTER DRAIN TOOL



This oil filter drain tool permits draining spinon oil filter prior to removal from the engine. Just clamp on to rear of filter with cutter, punch small air bleed at the top of the housing with anice pick, remove cutter and oil will drain freely in-can or hose-extended funnel.  
P/N 08-04200.....

## MODEL 2500 GAP SETTING TOOL



Complete with accessories, gauges and instructions for use. A precision gap setting tool for all massive electrode sparkplugs. Permits simultaneous adjustment of 2 opposite prongs without removing the spacing gauge.  
P/N 12-15500.....

## CT-446 SPARK PLUG TRAY



Steel tray holds up to 12 plugs. Speeds handling of used or new plugs. Holes numbered to correspond with engine cylinders. Protects against shielding barrel contamination. Dims: 5"H x 8"L x 3.5"W. Wt. 1 lb.

- (12 plug tray) ..... P/N 12-00795.....
- (18 plug tray) ..... P/N 12-00162.....

## CT-475AV AVIATION SPARK PLUG TESTER



Designed to clean and test all 14 and 18mm massive and fine-wire electrode aviation sparkplugs. Cleaner uses dry-abrasive air blast which quickly and effectively removes conductive deposits. The new "solid state" ignition test system produces a very stable ignition test voltage for greater accuracy and reliability. Contains a built-in automatic water trap. Size: 11.5"H x 16-3/8"W x 12-1/8"D. Requires 125-180 PSI compressed air and 115V 50/60 Hz AC. Power consumption: 35 W. For use with 230V, a 230V power supply and power cord is required (special order).  
P/N 12-00794.....

## MODEL 2600A VIBRATOR/CLEANER



Champion now makes it easier than ever to clean heavily lead-fouled spark plugs with this new, improved Vibrator/Cleaner. Each unit is shipped with all accessories required for cleaning fine-wire and 2-prong massive electrode aviation spark plugs. This unit features quick-change cleaning head assemblies, easy and inexpensive replacement of single cutter blades, improved heavy duty top-mounted switch and improved vibrator motor for faster cleaning and maximum durability.

- Model 2600A ..... P/N 12-15600.....

## NO. 91893 ABRASIVE COMPOUND



For use in CT-475AV Dry Abrasive Cleaner/Tester. Contains 1 full charge (15oz.). Note: This main item no longer ships with a tip unless it is ordered separately.  
P/N 91893.....

## ACCESSORIES

## 622 CHAMPION RUBBER TIP



- P/N 12-94023.....

TO

# SPARK PLUG TOOLS – OIL CAN CUTTERS



## ULLMAN UNIVERSAL SPARK PLUG GAP GAUGE

This gap gauge provides easy accurate spark plug adjustment. Features flanged edge for electrode bending and beveled round hole for opening gap. 1-1/2" diameter. Wt.: 0.8 oz. Scaled from .020" to .100". Pewter plating makes the inches more legible for user to read. Also available in metric scale (0.5 mm to 2.4 mm). Gap gauge (inches)

P/N 12-21375 .....



## CHAMPION CT-482 SPARK PLUG EROSION GAUGE

Champion CT-482 spark plug erosion gauge provides an easy, accurate method of determining whether your plugs have reached their maximum wear limit. Simply recap the used

plug to .016 nominal, then attempt to insert the electrode assembly through the chamfered hole in the gauge, as shown. Penetration of the hole by the electrode assembly indicates the plug has exceeded its recommended wear limits and should be replaced. The CT-482 is calibrated to reject plugs after their electrodes have eroded to at least one-half their original thickness. Although aviation spark plugs will continue to fire past this wear point, the rate of electrode erosion will increase as a result of non-parallel gaps and reduced sparking area. This leads to intermittent misfire, increased ignition system wear, and possibly costly unscheduled maintenance.

P/N 12-00791 .....

## "GET THE LEAD OUT" SPARK PLUG VIBRATOR CLEANER



Anyone that cleans a lot of spark plugs knows that a spark plug vibrator cleaner is the only way to go to break up and clean

out stubborn lead deposits. A spark plug abrasive cleaner is great for the finish cleaning, but it just won't take care of the lead deposits found down around the plug porcelain. Aircraft Spruce now offers an inexpensive way to professionally clean spark plugs. This 115V vibrator cleaner is small, light weight, easy to use. It is great for the pilot or mechanic that wants to carry one along — just in case. 90 day guarantee.

P/N 12-21355 ...../ea.

Extra Cutter Blades ..... P/N 12-01147 ...../ea.

## SPARK PLUG CLEANER



This economical spark plug cleaner cleans any size spark plug without changing the grommet. Features a 2-way valve and comes complete with abrasive powder and bag.

Cleaning Kit-2.2 lbs. ....P/N 12-00786 .....

Extra Powder-1.8 lbs. ....P/N 12-00787 .....

Extra Bag-0.06 lbs. ....P/N 12-00788 .....

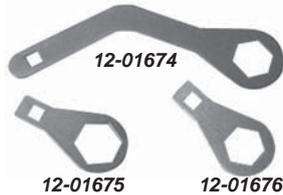
## CT-709 OIL FILTER ADAPTER WRENCH



The CT- 709 tool, designed by a professional aircraft mechanic makes the job easier. Manufactured from tool quality steel, the wrench features both 3/8" and 1/2" drives, as well as "flip over" reversibility. For Cessna adapter for 150 Series through 300 Series Aircraft.

P/N 12-00792 .....

## CHALLENGER OIL FILTER TORQUE WRENCH



Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" L

P/N 12-01674 .....

Challenger CP103 Oil Filter Wrench Torque Wrench Adapter 30 MMS

P/N 12-01675 .....

Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" ST

P/N 12-01676 .....

## OIL EASY WRENCH



The "Oil Easy Wrench" is specifically designed to remove the oil filter on any aircraft using the Teledyne Continental IO-520 or IO-550 engine. In fact, it is a universal oil filter wrench that works great on any piston engine airplane! Recommended at the Malibu Mirage Owners and Pilots Association (MMOPA) maintenance seminar!!! On IO-520's & IO-550's engines, it's the only wrench that can get between the top of the oil filter and the pressure pump and still provide enough leverage to remove the old (usually stuck) oil filter by hand. And because you are able to remove the old filter without any damage, your inspections of the old filter are more accurate, without any contamination from more extreme filter removal methods.

P/N 12-01552 .....

## CHAMPION CT-456A INSPECTION LIGHT



The angled bulb socket is kept out of the viewing field of the magnifier providing a large viewing area. With a 2.75 magnification, it provides an extremely long focal length, ideal for viewing into spark plugs or igniter leads. It can also look into drilled or tapped holes on a part making it easy to spot burrs or foreign matter in items such as valves & fittings.

P/N 12-00793 .....

## ACS OIL CAN CUTTER



This unit has the capacity of both P/N AFC-470 & 12-21395. It also uses the same replacement blade as the 12-21395. Anodized "Red" for corrosion resistance. Base can be clamped in a bench vise if desired. s black anodized.

P/N 12-01048 .....

## TEMPEST OIL FILTER CAN CUTTER



This universal cutter from Tempest is easy to use and is a great addition to any toolbox. It's made from high quality aircraft aluminum, making it lightweight and very durable. Works on all aircraft spin-on oil filters. Adapter pin easily removed for 'male' filters.

P/N 12-01392 .....

Tempest Oil Can Cutter Blades.

P/N 12-01393 .....

## AIRWOLF AFC-470 OIL CAN CUTTER



Every A&P knows the importance of cutting every single oil filter open after an oil change. The problem up to now was oil filters were difficult to open and the tools to open them were expensive. This is no longer the case with the Airwolf AFC-470 oil filter cutter. The AFC-470 is the easiest and quickest way to determine the current health of your engine. The Airwolf AFC-470 oil filter cutter is constructed out of a solid 6" billet of super strong 6061-T6 aluminum, hard anodized to resist scratches and wear. Stainless steel rollers allow the oil filter to spin effortlessly during cutting. And finally, our specially designed razor sharp cutter wheel hardened to 60 Rockwell, will make quick work of opening any oil filter. This filter is designed to last a lifetime. Fits new style oil filters.

P/N 12-00789 .....

Replacement Cutting Wheel..... P/N 13-03958 .....

## HAND CRANK OIL FILTER CUTTING TOOL



This tool was designed to eliminate much of the mess that occurs with small handheld oil filter cutting tools. Very simple to operate, it is excellent for individual aircraft owners as well as FBO's and maintenance shops where a lot of filters need to be cut. Simply clamp in a vise, screw on the filter, turn the cutter into the filter and hand crank to open the filter. The rugged construction enables this tool to operate trouble free for years.

P/N 12-00122 .....

Replacement Cutting Wheel.....P/N 12-01685 .....

## AVIATION OIL FILTER CUTTER



This aviation oil filter cutter will open any size oil filter canisters for your inspection. To use the tool, place the filter in a vice, attach the tool to the top of the filter, and rotate 4 to 6 turns to open the canister. The cutting wheel will stay sharp for about 50 uses, and is easily replaced when dull.

The tool is made from 6061 aluminum with a purple anodized finish. The tool is ready to use on any oil filter with a male or female thread. Oil filter cutter P/N 12-21395 .....

Replacement cutting wheel .....P/N 12-21396 .....

## TEMPEST AA471 OIL FILTER MEDIA CUTTER



Tempest's new AA471 provides a low cost, efficient and safe tool that every mechanic will want to put in their tool box. Strong guard and non-retractable blade to secure the media and ensure an accurate cut.

P/N 12-01854 .....

TO

# SPARK PLUG TOOLS – OIL FILTER TOOLS

## AUTOLITE SPARK PLUG TOOLS



**T-240 SPARK PLUG TRAY** - Holds up to 12 plugs in numbered holes that correspond to cylinder location.  
P/N 12-00702 .....



**T-245 SPARK PLUG EROSION GAGE** - Determines whether plugs have reached their maximum wear limit.  
P/N 12-00703 .....



**T-551 SPARK PLUG CLEANER / TESTER (115 VAC)** - Tests plugs at 24,000V, and up to 150 psi to simulate engine conditions. P/N 12-00704 .....



**T-552 SPARK PLUG CLEANER / TESTER (220 VAC)** - Tests plugs at 24,000V, and up to 150 psi to simulate engine conditions. P/N 12-00705 .....



**T-550-10 SPARK PLUG CLEANING TOOLS (PACK OF 10)** - Removes lead deposits and other contaminants, when used with a vibrator cleaner tool (T-559). P/N 12-00706 .....



**T-554 AUTOLITE SPARK PLUG FEELER GAUGE** - Sliding tabs check spark plug gap in decimals of an inch. P/N 12-00707 .....



**T-555 SPARK PLUG THREAD CHASER** - Unique apring action assures preservation of existing thread pitch diameter. P/N 12-00708 .....



**T-556 SPARK PLUG THREAD LUBRICANT & ANTI-SEIZE COMPOUND** - Helps to prevent galling and lubricates threads during installation. P/N 12-00709 .....



**SPARK PLUG DEEP SOCKETS** - T-557-1 3/8" drive w/ magnet P/N 12-01428 .....



T-558 1/2" drive w/o magnet P/N 12-00712 .....



**T-559 SPARK PLUG VIBRATOR CLEANER (115 VAC)** - Cleans out stubborn lead deposits. P/N 12-00713 .....



**T-560 SPARK PLUG CLEANER** - Complete with powder and bag. Features a 1-way valve. P/N 12-00714 .....



**T-570 SPARK PLUG TOOL KIT** - Includes a spark plug tray (T-240), erosion gage (T-245), cleaning tools (T-550-10), feeler gage (T-554), 3/8" drive deep socket with magnet (T-557) vibrator cleaner (T-559), and spark cleaner (T-560). P/N 12-00715 .....

## BB PRODUCTS FC-2000 OIL FILTER CAN CUTTER



Features: • Cuts all Champion and Kelly Aerospace 3.7" Dia. oil filters • Rugged 6061-T6 aluminum construction • Roller bearings provide smooth rolling action • Hardened hardware throughout • No parts or adapters to change • Made in USA - Hundreds sold! P/N 12-00923-1 .....

## BB PRODUCTS FMC-2000 OIL FILTER MEDIA CUTTER



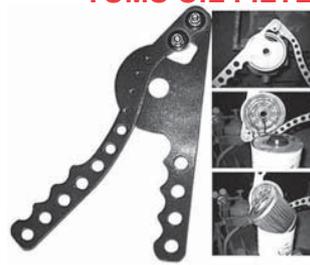
This patented tool is designed to hold Champion Aerospace brand Aviation oil filter spools, and to allow cutting the paper filter media at each end of the spool without holding the filter spool by hand. Using this tool reduces the risk of cutting one's hands while cutting the filter media as well as reducing the time necessary to accomplish this task. The filter media is rotated in a special holder that is supported by roller bearings. A knife, with a retractable safety cover is brought into position to make a clean cut of the filter media at each end. The filter media can then be removed for inspection. Patented. P/N 12-00925-1 .....

## BB PRODUCTS FH 2000 OIL FILTER HOLDER



The FH-2000 oil filter holder is designed to hold all Champion, Kelly Aerospace and Tempest Oil Filters for cutting. P/N 12-00924-1 .....

## TOMS OIL FILTER CUTTING TOOL



Tom's oil filter cutting tool will allow you to inspect your filters in an efficient manner. Most filter cutters work like a pipe or tubing cutter in that you have to go around and around the filter, adjusting cutter depth with each pass. Although you could do that with this tool, the real beauty of this new product is that the cut can be easily made in one pass. The task of inspecting filters can be a bit messy but it is also quick and easy to do and should be part of

your regular maintenance program. The tool, as supplied, is wet up for Lycoming oil filters that have a threaded insert sticking out of the end of the filter. This should cover almost all Lycoming engines, however, some of them and almost all Continental engines do not have this insert. A "center bolt" supplied with the tool can be used in these cases. To use the tool on smaller filters, such as Rotax filters, remove the cutter handle and reposition the pivot bolt to the inner hold on the base handle. The "center bolt" may have to be used on these filters as well. This tool will also work on a number of automotive filters. P/N 12-01697 .....

## MODEL 7000 OIL FILTER CUTTER



• Accepts both male & female styles of aircraft oil filters, and many automotive sizes. • Ball bearing rollers make it easy to turn the filter • Effective design helps insure a straight cut (the filter does not try to spiral off the cutter) • Heavy duty construction (designed for daily commercial use) • Aircraft quality aluminum construction • Replaceable hardened steel cutter wheel • Contoured knob is easy to turn, even with oily hands • Accepts oil filters 3 1/8" to 4" in diameter, which includes most aircraft oil filters such as Champion: CH48103, CH48104, CH48108, CH48109, CH48110 AND CH48111 • The cutter may be completely disassembled, and all parts are replaceable. P/N 13-03145 .....

## MODEL 7100 OIL FILTER KNOB



• Slips onto the hex of an aircraft oil filter • Large diameter knob for a strong grip even with oily hands. • Allows many filters to be installed and removed without using a wrench. • Works in tight spaces, you do not have to swing a wrench • Knob will accept a 3/8" drive ratchet handle to help remove very tight filters (ratchet handle not included) • Stainless steel core durability (your ratchet goes into stainless steel, not plastic). • Use a torque wrench to accurately tighten a new filter to the proper torque. • Handle can be used as a base to support the filter, holding it upright so the oil does not spill out. • Color: bright yellow. P/N 13-03146 .....

## MODEL 7300 OIL DRAINER



Make your oil changes less messy. Drain your oil lines and filter before removing the filter. Works with most Lycoming engines and remote filter installations, and some Continentals. When you drain the oil from the engine, you are only emptying the oil sump. Generally quite a bit of oil remains in the filter and oil lines (if you have a remote mounted filter). A remote mounted filter installation can easily hold a quart of oil in the filter and lines after the engine is drained. This oil will come pouring out when the filter is removed, making a mess in the engine compartment. Cleaning up this mess often takes longer than the actual oil change. The Oil Drainer clamps over the center of the oil filter. A hardened steel rod pierces the filter can and allows the oil to be neatly drained into your catch bucket. After the oil is drained, you can remove the filter with much less mess. P/N 13-03147 .....

## OIL FILTER WRENCH



The 1" hexes of the wrench easily fit Champion oil filters. The hexes are rotated 15 degrees from each other so by turning the wrench over or flipping it end-for-end you can easily find an orientation that allows you to get on the filter, even the tightest engine compartment. It's 6 inch overall length allows you to turn it tight locations, and the shorter length helps prevent over-tightening the filter during installation. P/N 12-01638 .....

TO

# SPECIALTY TOOLS

## ULLMAN MAGNETIC PICK-UP TOOLS



HT-3



HT-2



HT-1

These Ullman pick-up tools with Powercap offer a unique combination of features which make them ideal for work around aircraft. The stainless steel telescoping handle is strong, long, and lightweight, and the comfortable, textured cushion grip keeps handle secure even in wet or oily hands. The head features a compact industrial strength magnet for retrieving heavy objects in tight places. The powercap shields magnet side so that the head can be easily guided past ferrous metal objects. Available in 3 convenient sizes.

**HT-1** lifts 1-1/2 lbs, over 2 lbs with POWERCAP™ telescopes from 6-5/8" to 33-1/4" P/N 12-21385.....

**HT-2** lifts 3-1/2 lbs, over 5 lbs with POWERCAP™ telescopes from 6-5/8" to 33-1/4" P/N 12-21386.....

**HT-3** lifts 5 lbs, 10 lbs with POWERCAP™ telescopes from 6-3/4" to 30-1/4" P/N 12-21387.....



**CHP4-L HOOK & PICK SET** - has picks that are 9.75" long with textured cushion grips. These longer picks are ideal for working in hard to reach awkward areas.

P/N 12-00716.....



**MSR-3 MEGAMAG SOCKET RACK** - has a strong magnet on the front of the racks that keeps 1/4", 3/8" & 1/2" drive sockets together, organized and ready to use. The magnetic force on the back holds the rack loaded with sockets to most flat metal surfaces.

P/N 12-00717.....



**GMC-2 DUAL PURPOSE TOOL** - contains a MegaMag Pickup Tool that lifts 16 lbs. and a 2.25" Inspection Mirror with a metal base that mounts in seconds and brings hidden areas into full view.

P/N 12-00718.....

## STEELMAX MAG-IT MAGNETIC PICK-UP TOOL

Safely remove metal chips and debris from machinery and work areas using SteelMax Mag-It® magnetic pick-up tool. The Mag-it® slide action lever quickly demagnetizes the tool, which releases chips for disposal.

10 inch Pick-Up.....P/N 12-01714.....

15 inch Pick-Up.....P/N 12-01715.....

## EXHAUST PORT RESURFACING TOOL

The exhaust port resurfacing tool is designed to recondition port surfaces where no more than .010" of material need to be removed. It is easily bracketed and aligned to the port in reference to the rocker cover surface. Execution of the cutting operation only requires hand power. No air or electrical power is required. Mounting bracket adapters are available for the following engines: A&C series continental, Lycoming Parallel Valve, Lycoming Angle Valve, others on request.....

A & C Series Continental Bracket.....P/N 12-17605.....

Lycoming Parallel Valve Bracket.....P/N 12-17610.....

Lycoming Angle Valve Bracket.....P/N 12-17611.....

Cutter Head Inserts.....P/N 12-17607.....

**EAR ISLAND REMOVAL TOOL** - When substantial quantities of material have to be removed from the exhaust port, it may be necessary to also remove the island around the exhaust stud area. The ear island removal tool and pilot can be used to accomplish this without the use of power tools.....

P/N 12-17608.....

## DELUXE HEAT GUN

This handy tool gives you a fast, drum-tight, mirror smooth finish. It's ideal for heat-shrinkable covering films. Get a professional finish with less time and effort. 1-yr warranty. Features: •Includes removeable wide nozzle •1000W heating power •Heavy-duty fan motor •Textured, composite hand-grip •3-position, hot/cool/off switch •Adjustable air intake baffle • Wt: 15 oz • 5.5' AC power cord w/2-prong plug. P/N 12-00527.....

## THE CORE RECESSOR

The core recessor is a new product with the purpose of serving as an efficient tool that makes the process of removing core cells in Nordam Panels and composite fiberglass more efficiently. Thus, it reduces time for edge fillers, which are necessary procedures to customize aircraft cabinets, floorboard, vanity's headliners, valance panels, etc. Is light weight, easy and safe to use. Core panels from 1/8 to 3/4 inch with no adjusting. Requires no electricity.

Core Recessor.....P/N 12-02270.....

Core Recessor Mini.....P/N 12-02271.....

## HANDY MAG RETRIEVAL TOOL



The Handy Mag is the size of a pen and can be carried in a shirt pocket. It telescopes out to an extended length of 32" and

the magnet on the tip can pick up objects over 2 lbs. Excellent for retrieving dropped tools or parts in engine compartments or other unreachable areas. Tough stainless steel body. P/N 12-14550.....

## AMAZING ROD SAW



Tiny particles of tungsten carbide, one of the toughest and hardest substances in the world, have been bonded to a steel rod to produce the Rod Saw. Fits standard 12" hacksaw frame. Use when regular hacksaw will not work. Lets you cut steel, rock. Not recommended for soft materials. P/N 12-01180.....

## EXHAUST DESICCATOR PLUGS FOR EXHAUST STACKS



Quality made polyurethane rubber plug won't wear out and provides a positive seal in the exhaust pipe.

Desiccator housing contains interchangeable desiccator canisters. Desiccant never needs to be removed from canister for drying. Removal flag and cap attach to external end of plug when in use. During storage, flag cap fits on desiccator chamber. Limits internal engine damage caused by corrosion. Fits 2" dia. exhaust pipes. Other sizes available as a special order. Minimum special order 5 pieces. P/N 12-30212.....

## HIGH CAPACITY EXHAUST DESICCATOR



2.5 times the desiccant capacity of previous design. One piece construction allows the desiccant to be contained in the core of the plug. Made of durable high quality urethane rubber that will last almost indefinitely.

P/N 12-01057...../ea

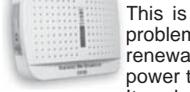
## GOLDENROD DEHUMIDIFIER



This compact, low-voltage dehumidifier is an ideal way to eliminate dampness and mildew in aircraft which can cause mildew growth in carpet and upholstery and wreak havoc with electrical systems. In stall under the instrument panel or on the deck between seats. If installed in the engine compartment, Goldenrod will eliminate moisture which leads to rust, keep ignition wiring dry, and facilitate cold weather starts. In the hangar, Goldenrod can protect parts, tools, supplies, and components. Operates on standard 110V current 24 hours per day but uses four times less power than a standard light bulb. Safe and effective. Available in four lengths.

Part No.	Length	Watts	Approx. Coverage Up To	Price Ea.
12-30225	12"	8	100 cubic feet	.
12-30230	18"	12	200 cubic feet	.
12-30235	24"	15	300 cubic feet	.
12-30240	36"	25	500 cubic feet	.

## EVA-DRY DEHUMIDIFIER



This is a product that is the answer to a very common problem in Aircraft, HUMIDITY!!! The Eva-dry is a 100% renewable, wireless, mini dehumidifier that requires no power to operate.

It works with a Silica gel that absorbs moisture from where ever it is placed. There is an indicator window on the front of the unit that will change from blue to pink as the units absorbs moisture. Once the crystals have turned pink it is time to renew.

To renew, simply fold down the hidden plug on the back of the unit and plug it in to any a/c outlet for 8-10 hours. A heating element will be activated which will evaporate the moisture. The Eva-dry has a 10 year life span and has a 5 year mfr. Warranty. Size: 6.25" X 4.75" X 1.25".

P/N 12-01621.....

## SCROOGE CLAMP



By attaching this mechanism to any brace, piece of wood or steel, it can be made adjustable simply by turning the handle. It works like a C-Clamp that will push or pull. It can be used in place of a bar or pipe clamp, and can be made

any length by using a 2x2 or 2x4 piece of lumber. Using it, any object or aircraft part can be moved into its exact required position, within a 1/64 of an inch, simply by turning the handle. It is a large turnbuckle with attachment plates at either end. It can be used to plumb walls, square up framing, pull together studs and joist (or push them apart) and straighten warped structural members for fixing in place. It can exert up to 2000 lbs of force with 80 lbs of force on the turnbuckle handle. In most common use, one plate is screwed to a 2x4 and the other to a stud wall or post. The free end of the 2x4 is then nailed or screwed to a joist deck, floor, etc. Maximum travel is 7-3/4". P/N 12-00636.....

TO

# TOOLS

## WING STAND



This wing stand is ideal for aircraft homebuilders or restorers needing to safely store and protect aircraft wings during the project. It accommodates virtually all shapes and sizes of wings and is available at a very economical price. We ship this wing stand direct to you from the factory (freight collect). Dims: 72"l x 44"h x 36"w. Assembly req. Each stand holds 2 wings.  
P/N 12-21390 ...../Jea

## AEROROLLER-1000



AeroRoller makes movement of your aircraft or wheeled equipment easy. Aircraft can be loaded on AeroRoller without jack and minimum effort is required to move aircraft when on rollers. AeroRoller is constructed of Industrial 1/4" steel plate. Heavy duty Duraform 360° swivel castor wheels means no flat spots. Brake castor lock parking location. Each unit can carry 1000 lbs.

Manufacturer's warranty covers defective parts & labor.  
2-Roller Set.....P/N 13-00071 .....  
3-Roller Set.....P/N 13-00072 .....

## TENNSMITH BRAKES & SHEARS



**HAND BRAKE & STAND** - Versatile, economical hand brake designed for straight forming of mild steel in thicknesses of 22 gauge & lighter. Made in the U.S.A by Tennsmith. Bends material up to 48" wide. Wts: brake: 280 lbs. Optional stand: 95 lbs. Ideal for bending materials used in light aircraft construction. Shipped direct to you from factory in Tennessee.

Model S48-22 hand brake.....P/N 12-20700 .....  
Optional Stand.....P/N 12-20705 .....

**UNIVERSAL HAND BRAKE & STAND** - Tennsmith's heavy duty universal hand brake is a great tool for a wide range of sheet metal binding and forming operations in 12 gauge and lighter mild steel. The brake is ideal for both box and pan and straight bending in hold and cold rolled plate, stainless steel, aluminum, and heavy plastic. Welded steel plate construction for strength and rigidity. Bends material up to 48" wide Wts: brake:

1330 lbs. Optional stand: 95 lbs. Shipped truck collect direct to you from factory in Tennessee.

Model HBU48-12 Hand Brake.....P/N 12-20710 .....  
Optional Stand.....P/N 12-20705 .....

**FOOT SQUARING SHEAR** - Tennsmith squaring shears offer precision shearing and rugged construction. These shears feature traction, ground alloy tool steel blades to prevent material movement during shearing. Will shear material up to 16 gauge mild steel and up to 20 gauge stainless steel. Both blades are adjustable and back gauge gives highly accurate readings. Wts: Model 36: 700 lbs. Model 53: 950 lbs. Shipped truck collect to you direct from factory in Tennessee.



Model 36 Shear (Max. Cutting Width 37") P/N 12-20715 .....  
Model 52 (Max. Cutting Width 52") .....P/N 12-20720 .....

**TENNSMITH** -These products are shipped truck, priced F.O.B. McMinnville, TN. Allow 4-6 weeks for delivery

## LAP JOINT JOGGLE TOOL

**FOR UP TO .032 ALUMINUM SHEET** - To use the Lap Joint Joggle Tool, install washers to adjust joggle set-back from edge of sheet. Start at one end of sheet and pull smoothly along edge to be joggled. Keep back plate of tool firmly and squarely against edge of sheet for smooth and parallel joggle. To break a sheet edge, insert sheet just one bearing depth (.4") then bend down as desired as tool is pulled along edge. Adjustments - For set-back, add or subtract washers. For different material thickness, loosen bolts, spread or close. For use on aluminum sheet up to .032 thickness.



P/N 12-30275 .....

## NON-CONTAMINATING SCRAPER

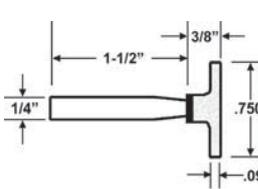
Our Non-Contamination Scraper is suitable for all airframe scraping operations. It will not contaminate delicate aluminum parts with steel particles which can induce corrosion. It is easily resharpened with a mill file and the .060" thick heat treated aluminum blade is easily replaceable. Features positive wood grip handle.



P/N 12-30205 .....

## SEAT TRACK CLEANER

Maintaining adjustable cockpit seats, or passenger seating secured in notched tracks, requires removing the dirt and grit that have become embedded in the tracks. Rex-Cut Products has developed a thin-profile mounted wheel specially designed to accomplish this job efficiently and safely. The seat track cleaners are manufactured using layers of reinforced nonwoven cotton fiber and abrasive grain which are bonded into discs. When mounted on a die grinder they are able to fit inside the seat tracks. Designed for cleaning all the interior surfaces of the track without having to change discs, one disc will remove caked on sludge, dirt and grit while removing minor burrs and rough edges. The seat track cleaners are non-loading on aluminum and leave superior surface finishes. Available in 54 and 80 grits in aluminum oxide grain mounted on a 1/4 x 1/2" shank.



54 Grit Seat Track Cleaner ..... PN 12-00955 .....  
80 Grit Seat Track Cleaner ..... PN 12-00952 .....

## THE TOOL GRIP - TOOL AND CRAFT HOLDER

The Craft Grip is designed to hold tools or other items in the same manner as the Pen Grip. It differs only in the method of attachment. The attachment device is a u-shaped clip that fits over the edge of many surfaces and holds the organizer in place. These cups snap firmly onto the gripping unit. Its most popular uses are car and truck visors, tool boxes, painting easels and many other locations without harming or being permanently attached to the surface Available in Black or White.



Get a Grip Tool Grip (Black).....PN 12-00953 .....  
Get a Grip Tool Grip (White) .....PN 12-00954 .....

## THE PEN GRIP - PEN AND TOOL HOLDER

The Pen Grip attaches to almost any surface with double stick tape. Just peel off the backing on the attached double stick adhesive, press firmly onto the surface to which you want it attached and insert your tools. The unique gripping fingers hold all sorts of pens, pencils, & tools in many different positions, even upside down. Like the Tool Grip, The Pen Grip is available in White and Black.



Get a Grip Pen Grip (Black).....PN 12-00961 .....  
Get a Grip Pen Grip (White).....PN 12-00962 .....

## WIRE SPOON



**Features:** • Wire threader designed for threading wires into an already tied harness • 300 Series stainless steel construction • Made in America for superior quality  
P/N 12-01801 .....

TO

# NOTCHERS

## ACCU-JIGGER TUBING NOTCHERS



Constructed of 6061T6 hard anodized aluminum extrusions, steel, and cast iron with two 2750 lb. rated roller needle bearings, the Accu-Jigger rigidly holds the holesaw and tube to produce accurate, chatterless cuts. Accu-Jigger, with Single Point Technology, is able to notch tubes that "Fit Right The First Time" as fast as those produced from custom tooling. It

employs a flip up Tube End Stop, (2) 1° step, pin settable Angle Indexes and standard bimetal holesaws to accurately notch the ends of tubes used in aircraft fuselages and engine mounts. Notches tubes up to 1" diameter with up to 2" holesaw at angles from 30 to 90°. Spin Angle settable 0 to 359°. Meant to be driven by 1/2 inch chuck hand drill or mounted to a drill press.

1" diameter capacity.....P/N 12-00377 .....  
2" diameter capacity.....P/N 12-00529 .....

## MAGNETIC BIT CADDY



A non-spill bit holder at your fingertips. 36 individual 1/4" and 5/16" screwdriver bits may be stored in this magnetic-based organizer. Remains solid at any angle placement while

holding bits in their respective slots. ....P/N 12-01083 .....

## THE SPINNING RATCHET



This tool is a combination tool providing a ratchet wrench for power and a spinning action for speed. All types of accessories can be used with this wrench, such as extensions on either end, or flexible drives. The drive handle can be removed to make a very compact tool for restricted areas. The ratchet pawl is made from annealed steel to allow it to fail before the ratchet

gear as it is a low cost item. The spinning gears are protected by a shear pin that will fail before the bevel gears, again a low cost item replacement, rather replace one or both of the bevel gears if they become over loaded. The pawl is pointed on one to distinguish the on or off motion. 3/8" drive .....P/N 12-00742 .....

## PNEUMATIC HIGH SPEED DRILL



This heavy duty pneumatic drill will give years of consistent service. Due to speed and design this drill is excellent for deburring or grinding when used with mounted wheels or points. When used with a mounted wire brush it functions as an excellent scaler. As a drill it is adaptable to wood, plastic, rubber, aluminum, brass and sheet metal where contact is brief. Drilling capacity: Steel - 1/8", plastic -3/16", wood - 1/4". Specifications: 13,000-17,000 RPM 80-150 PSI. 4-vane motor. Air supply: 4 CFM 80 PSI. Wt. 2 lbs.

5 oz. 1/4" chuck. Model 10.....P/N 12-01659 .....

## THE 3RD HAND WELDING CLAMP



A simple yet rugged tool, The 3rd Hand was designed to hold round or square tubing in place during the welding process. Originally used for aircraft engine mount and airframe fabrication work, it has many other applications. This steel fixture is infinitely adjustable due to its full swiveling clamp. Each model comes with 3 different length arms (3.5",

5.25" & 7.5") Hose clamps are not provided.  
Model 01 (for tube size 3/8" - 2.5").....P/N 12-00736 .....  
Model 02 (for tube size 3/4" - 4").....P/N 12-00737 .....  
Model 03 (for flat sheets or plates ) .....P/N 12-00747 .....

## MAGNETIZER / DEMAGNETIZER



This versatile tool saves you time and trouble by instantly magnetizing or demagnetizing you tools & parts on the job. Reliable, powerful permanent magnets for a super long life, and its compact size, shatterproof plastic shell, this tool will fit easily in you tool box. This tool allows easy, precise handling of small steel parts in confined spaces, collects metal items from inaccessible places, leaves 1 hand free for positioning the work piece,

demagnetizes instruments & electronics components. Size: 2.1"x2"x1.1". Wt. .22 lb. P/N 12-16835.....

## OL' JOINT JIGGER



**OL' JOINT JIGGER MODEL RTN-100 TUBING NOTCHER -** Ol' Joint JiggerTM quickly notches tubing of up to 2" O.D. in less than 30 seconds. Great for assembling and welding tubing in your garage or workshop. Adjusts in single degree increments to make up to 60° angle notches. Automatic round tubing centering and alignment. CNC machined steel construction. Bi-metal hole saws not included. Use with your 1/2" hand drill. U.S.A. Ship Wt. 9 lbs.

P/N 12-01107 .....



**RTN-BASE (UNIVERSAL DRILL PRESS MOUNT) -** For use with RTN100 only. Allows for set up and dedication of a small drill press for tube notching. Adjustable for out-of-square tables, the RTN-Base also makes it easy to lay the notcher over horizontally, still bolted to the table, to handle long or cumbersome tubing that can't be notched in a vertical position. Minimum requirements: 1/3HP drill press with 3-1/2" of travel and 14" from the table or base to the chuck. (Bolts for attachment included) U.S.A. Ship Wt. 3 lbs. P/N 12-00691 .....



**OL' JOINT JIGGER MODEL RTN-1000 DELUXE ALUMINUM TUBING NOTCHER -** Ol' Joint JiggerTM combines precision performance, versatility and comfort for quickly notching tubing of up to 2" O.D. in less than 30 seconds. Enhanced vibration-reducing design and dual-axis base allow for either work bench or drill press mounting to provide the professional or hobbyist with the ultimate in tubing notchers. Laser-engraved protractor allows adjustments in single degree increments to make up to 60° angle notches. Automatic tube centering and alignment. Anodized aircraft-grade aluminum construction. Bi-metal hole saws not included. Use with your 1/2" hand drill or drill press. U.S.A. Ship Wt. 9 lbs.

P/N 12-01108 .....

## RTN NOTCHER REPLACEMENT PARTS & HOLESAWS

Description	Part No.	Price
5/8"-18 Thread Adapter	12-00020	.
Main Arbor/Shaft (1/2"-20 Thread)	12-00021	.
Bushings for Arbor Support (pair)	12-00022	.
5/8" Holesaw	12-00023	.
3/4" Holesaw	12-00024	.
7/8" Holesaw	12-00025	.
1" Holesaw	12-00026	.
1-1/8" Holesaw	12-00027	.
1-3/8" Holesaw	12-00029	.
1-1/2" Holesaw	12-00030	.
1-3/4" Holesaw	12-00032	.
1-7/8" Holesaw	12-00033	.
2" Holesaw	12-00034	.

## HOLESAW ASSORTMENTS

Description	Part No.	Price
1", 1-1/8", 1-1/4", 1-3/8", & 1-1/2"	12-00035	.
1-1/8", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"	12-00036	.
1-1/4", 1-3/8", 1-1/2", 1-5/8", & 1-3/4"	12-00037	.
1-3/8", 1-1/2", 1-5/8", 1-3/4" & 1-7/8"	12-00038	.

## PIPEMASTER WELDER'S TOOL FOR CONTOUR FITS



Pipemaster gives aircraft builders the ability to cut a piece of tubing on both ends and have it fit its intended location on the first try. Tedious hours of grinding and misfit joints can be eliminated producing exact welds and stronger airframes. Features spring temper stainless steel pins, aluminum inner shell, and rugged ABS housing. Simply slip over the pipe, push down, transfer and cut, and the tubing is ready to weld. Pipemaster transfers the exact outline of the pipe joint in just seconds. Use for penetration cuts as well.

Part No.	Tubing O.D.	Price	Part No.	Tubing O.D.	Price
12-00102	3/4"	.	12-00109	1-1/2"	.
12-00103	7/8"	.	12-00111	1-5/8"	.
12-00104	1"	.	12-00112	1-3/4"	.
12-00105	1-1/8"	.	12-00113	1-7/8"	.
12-00106	1-1/4"	.	12-00114	2"	.
12-00107	1-5/16"	\$49.80	12-00116	2-3/8"	.
12-00108	1-3/8"	.			

TO

# NOTCHERS - SURFACE TREATMENT ITS

## JMR NOTCHERS



Made in the U.S.A! • Highest quality, most versatile notcher on the market • Capacity greater than notchers costing 10-20x more! • Notches faster and better than any end mill/belt notcher • Manufactured from bar stock not plate, to increase strength 1.125" induction hardened shaft supported by Timken™ bearings • Custom designed shaft seals prevent bearing/shaft damage • Replacable hole saw mounting threads • Timken™ thrust bearing increases clamping force (at pivot) while reducing wrench pressure, making angle changes easy • Capable of notching in a 210° arc • 2.5" tube, 2" pipe capacity • Double v-clamp vise allows square to be held flat or corner to corner • Will hold thin wall tube without distortion • May be clamped on tube/pipe to bore holes • Greatest hole saw life of any notcher (Average 200+ cuts)\* • Multiple mounting positions • Designed for prototype and production work • Engraved degrees and stainless steel pointer ensures accuracy • Aluminum bronze acme threaded bushing on clamp. P/N 12-01389 .....

## MR IMPLIES



Made in the U.S.A! • Made from heat treated 4142 steel • Will dimple .125" 4130 • All corners radiused • Set of 7 includes fi, fl, 1, 1/4, 1 fi, 1 fl, 2". P/N 12-01390 .....

## MR MANUAL BENDER



Capacity greater than benders costing 10-20x as much!! • Dies available in 120 and 240 • Will bend .250 wall 4130 Tube • Dies are all billet • Follower blocks case hardened .050 min. • Lifetime guarantee against breakage on dies • All pins made from heat treated 4140 • Aluminum bronze bushings at pivot points • Light weight and portable - 110 volt • Built for industrial use, yet affordable enough for everyone P/N 12-01388.....

## MB ITS ACCESSORIES

### MONTI MBX Surface Treatment Systems

**PATENTED TECHNOLOGY** - MB Systems are different from conventional surface treatment systems in that MB Systems are based on several physical principles. Flexible brush-belts are inserted loosely into a cage-like adaptor system and secured with safety arms. The centrifugal force created by rotation causes the brush-belt to tighten and work as if suspended on a cushion of air. Advantages: vibration-free operation: The vibration of the wire bristles that occurs when the bristles strike the target surface is absorbed by the air-cushion. The bristles re-strike the target surface at rest (without vibration). This achieves the maximum kinetic energy.

**MBX BRUSH-BELT TECHNOLOGY** - MB Belts consist of individual, U-shaped crimped wire bundles anchored in a polyamide fabric. Made of spring steel, the wires have hardened tips that strike the target surface individually during rotation.

**ADVANTAGES** - High safety level: The U-shaped anchor points of the individual crimped bundles prevent wire bristles from being thrown clear. No heat development: Avoid toxic fumes and no smearing during the removal of sticky materials. No grinding: No removal of healthy material, no deformations. Flexibility: High degree of adaptability when working on contoured areas or areas with sharp edges. Optimal performance: Because of their design, each wire tip strikes the target surface twice per rotation. Long service life: Specially hardened wire tips with a hardness up to 68 HRC (Rockwell hardness) provide for a level of hardness never before achieved with conventional brush technology.

**MBX PNEUMATIC DRIVE UNIT** - Easy handling, lightweight - 1.1 kilograms, high torque, safe to use Specially developed for the MB brush-belt and MB inyl apper systems. The high output rpm of the compressed-air turbine (21,000 rpm) is reduced to 3,500 rpm by means of a planetary gear and toothed belt torque increases. This gives our MB pneumatic drive units an optimised power profile. MB brush-belts and MB eraser wheels work as a direct extension to the drive shaft, i.e., there is no lateral centre of gravity and MB drive units operate in-line. Work in hard-to-reach areas or in the removal of tough, thick, sticky materials (e.g. compounding materials, underbody corrosion) with optimal ventilation.

## MB PNEUMATIC STARTER SET



For the removal of seam sealant, corrosion, paint, vinyl decals, glue on aluminum and alloy.  
**SET 1** - MP-3500 - MBX Pneumatic Power Tool S (3500 rpm) with adapter system for 23mm belts/31mm rubber eraser. • AA-0011 - Adapter for 11mm wire belts • BS-M11X - V2A Wire Belt, Med., 11mm angled tips • BS-F11 - V2A Brush Belt, Fine, 11mm • RE-0023 - Rubber Eraser, 31mm P/N 12-01394 .....

## MB ELECTRIC STARTER SET



For the removal of seam sealant, corrosion, paint, vinyl decals, glue on aluminum and alloy.  
**ME-3200 - MBX ELECTRIC POWER** - Tool A (3200 rpm) with adapter system for 23mm belts/31mm rubber eraser • AA-0011 - Adapter for 11mm wire belts • BS-M11X - V2A Wire Belt, Med., 11mm angled tips • BS-F11 - V2A Brush Belt, Fine, 11mm • RE-0023 - Rubber Eraser, 31mm P/N 12-01396 .....

## MBX BRUSH BELTS



Medium (11 or 23 mm)  
For the removal of seam sealant & corrosion on aluminum bodies



Fine (11 or 23 mm)  
For the removal of paint on aluminum bodies.

MB Belts are made of a high-performance polyamide fabric - tension resistant up to 440 kilograms. Individual bristles made of spring steel or stainless steel are anchored U-shaped in the flexible polyamide fabric. The materials used for the production of MB Belts offer top safety and durability due to the high flexibility of the MB Belts. No clogging - no heat built-up - no grinding. The high masses due to centrifugal force during rotation are absorbed safely by MB Adapter Systems. MB Medium have angled tips to create a sandblast effect. 11mm is for especially hard-to-reach-areas such as a 90° angles.  
BS-M11 Med. Blue 11mm Brush P/N 12-01402 .....

## MBX VINYL ZAPPER



"The rotating toothed eraser wheel", patented For the removal of self-adhesive foils and materials, wide-area decoration, adhesive residue on decorative strips and lettering on OEM-painted surfaces made of metal, aluminium, glass, fibreglass (gel coats) - and most amazing: NO PAINT DAMAGE. The centrifugal force created by rotation makes the MB inyl apper work as if suspended on a cushion of air. Advantages: Faster working speeds of up to 3,500 rpm Conventional rubber eraser wheels operate only at circa 1,500 rpm. No paint damage, no smearing despite speeds of 3,500 rpm Toothed wheel design. Easy handling. vibration-free, smooth running (compare a solid rubber tire with an air-filled tire). Increased performance. The working surface of the MB inyl apper is strongly enlarged by the application of pressure to the work surface. This improves performance (compare to a car tire containing only a small amount of air). Long service life Wide construction. inyl apper 31mm Toothed Wheel Construction Removal of elements such as vinyl decals & DOT tape from metal surfaces, fiberglass, plate glass, wood, aluminum, OEM paint finish. P/N 12-01406 .....

## MBX VINYL ZAPPER KITS



MB inyl apper it is for removing vinyl decals and graphics on metal glass and fiber glass. It is available with either a pneumatic tool or an electric tool.

Description	Part No.	P
MB Electric inyl apper it USSE-01-05 MB Electric Tool. 1-23mm Adaptor. 3 inyl Erasers	12-02037	.
MB Pneumatic inyl apper it USSP-01-05 MB Pneumatic Tool. 1-23mm Adaptor. 3 inyl Erasers	12-02038	.

## STORAGE STATION



For storage of up to 15 wire belts or 9 rubber erasers and one MB Power Tool (machine, belts, erasers not included). P/N 12-01399 .....

TO

# CLECOS - HOLE SAWS - CRIMPING TOOLS

## CLECO SHEET HOLDERS



**K-SERIES SPRING CLECOS** - Sheet holders provide the quickest method for holding sheets together for drilling or riveting. Drill the size hole needed for the rivet and insert the sheet holder. The holders listed comprise the most common sizes. Material thickness range 0" - 1/4". Use with sheet holder pliers. **10% discount on 50 pcs.,**

**15% discount on 100 pcs.**

Description	S	Part No.	P
M-3/32 CLECO	3/32"	12-01140	
M-1/8 CLECO	1/8"	12-01138	
M-5/32 CLECO	5/32"	12-01141	
M-3/16 CLECO	3/16"	12-01139	

**KK-SERIES SHORT BODY SPRING CLECOS** - A shorter overall body to use in areas of limited space. 0-1/4" grip range. Made in USA

Description	S	Part No.	P
CC-3/32 CLECO	3/32"	12-02073	
CC-1/8 CLECO	1/8"	12-02074	
CC-5/32 CLECO	5/32"	12-02075	
CC-3/16 CLECO	3/16"	12-02076	

**KHD-SERIES LONG REACH SPRING CLECOS** - Designed for clamping thicker material. 0-1/2" grip range. Made in USA

Description	S	Part No.	P
CHD-3/32 CLECO	3/32"	12-02077	
CHD-1/8 CLECO	1/8"	12-02078	
CHD-5/32 CLECO	5/32"	12-02079	
CHD-3/16 CLECO	3/16"	12-02080	



## CLECO EEPER

Fabricated of durable polypropylene, the Cleco eeper is pre-punched to hold up to fifty sheet metal fasteners.

Allows the builder to extract and install Clecos from the storage bin to the work with one hand. Compact, the Cleco eeper measures 8"L x 3"W. Helps eliminate misplaced fasteners and makes inventory of available fasteners quick and accurate. Available in three models to hold 3/32", 1/8", or 5/32" clecos. For 3/32" clecos.....P/N 12-10116  
For 1/8" clecos.....P/N 12-10117  
For 5/32" clecos.....P/N 12-10118  
For 3/16" clecos.....P/N 12-00604



## NO-MAR™

### REUSABLE CLECO BOOTS

Eliminates surface marring both on painted and unpainted surfaces. Easily slips on plier operated style clecos, one size fits all. Yellow polyurethane color. 25 pcs./pkg. P/N 12-00626



## CLECO SHEET HOLDER PLIERS

These pliers are designed to grip and actuate all standard sizes of sheet holders and tension clamps. New manufacture. P/N 12-10105



## CLECO REVERSE PLIERS

Used in limited access areas. requires less travel per activation. Model TP74B. P/N 12-00370



## PNEUMATIC CLECO INSTALLATION TOOL

This new pneumatic cleco installation tool features a lever throttle, 360° swivel mount, quiet operation, a straight handle, and a 6ft. polyurethane lead hose. The ergonomic design and its ease of operation allow for quick insertion of all button or plunger type fasteners, including slide grips. Wt. 12 oz. Length: 5 1/8". Air Inlet: 1/4". P/N 12-01120



## COUNTERBORE

This 5/8" diameter boring tool, has 1/4" diameter pilot. A 10" thread extension is used for boring holes in hard-to-reach places. Primary use is in the installation of the landing gear on the LongE and Cozy aircraft. 3/4" bore does not have 1/4" pilot and must use the pilot received with the 5/8" boring tool. 5/8" dia. w/pilot.....P/N 12-00219  
3/4" dia. w/o pilot.....P/N 12-00220

## HEAVY-DUTY SHOE SAW ARBORS

**ARBOR** - Use for hole saw sizes 5/8" through 1-3/16". 3 milled flats prevent slipping in chuck. Pilot hole size 1/4". Has 1/4" shank. P/N 12-01993

**QUICK CHANGE ARBOR** - Use for hole saw sizes 1-1/4" and larger. The Quick Change 7/16" shank prevents slipping in chuck. Pin drive construction permits fast interchanging of hole saws without removing arbor from chuck. Pilot drill size 1/4". P/N 49-56-7055



## STURDY STEP SAFETY PLATFORM

This 22" square platform puts you at the right height so you can work comfortably and safely. Heavy duty construction for years of dependable use. With the Side Kick, your Sturdy-Step is even more useful. It attaches to the Step in seconds and keeps all of your hand tools and small parts at your fingertips.

**Features:** Holds up to 350 lbs. • Rubber non-slip feet • Meets all of OSHA safety requirements •

The top & bottom steps feature perforated tread areas to help prevent slips • Yellow traction markers are also placed on the edge of each step for added safety. P/N 12-00206

## ACCESSORIES FOR THE STURDY-STEP

**SIDE KICK TRAY** - Tray holds many small tools and allows you to work without making several trips to the work bench or tool box. Attaches to Sturdy-Step with one Phillips head screw and a special clip. Wheels allow you to move the step without lifting or dragging. P/N 12-00207

**KICKSTAND** - Adds extra stability and increases maximum load capacity to 25 lbs. P/N 12-00209

**SPRING-LOADED CASTER SET** - Caster assemblies make it easier to move Sturdy-Step without lifting or dragging. Each caster is equipped with a special spring. When you step on the Sturdy-Step, it settles onto the rubber feet, making it a stable, work platform. Set includes 4 caster assemblies, installation hardware & instructions. P/N 12-00208

**WHEEL AND HANDLE KIT** - Attaches to the Sturdy-Step quickly and easily. Wheels allow you to roll the step freely without lifting or dragging no more back bending, no marred floors. Tip of handle is 44" from ground. Net weight: 7 lbs. P/N 12-00211

## HEAVY-DUTY BI-METAL HOLE SAWS



Milwaukee hole saws provide an economical means of extending the useful range of portable drills, drill presses and lathes. High speed cutting edges welded to steel bodies produce clean, accurate holes All hole saws listed cut to standard 1.25" depth. Order appropriate arbor for use with each size hole saw.

Hole Dia.	Part No.	Use w/Arbor No.	P
5/8"	49-56-0620	12-01993	
3/4"	12-02001	"	
7/8"	12-01992	"	
1"	49-56-1000	"	
1-1/8"	12-01991	"	
1-3/16"	49-56-1180	"	
1-1/4"	49-56-1250	12-02001	
1-3/8"	49-56-1370	"	
1-1/2"	12-01990	"	
1-5/8"	49-56-1620	"	
1-3/4"	49-56-1750	"	
1-7/8"	49-56-1870	"	
2"	49-56-2000	"	
2-1/4"	49-56-2250	"	
3-1/8"	49-56-3120	"	

## SUPERCHAMP IV CRIMPING TOOL

The professional quality crimping tool. This versatile hand tool has a separate set of crimping dies for insulated and uninsulated terminals and splices in wire sizes No. 22 to No. 10 AWG. It has a terminal locator to position insulated terminals during crimping and an in-nose cutter for tight locations. This tool is a wire stripper and has a built-in heavy duty bolt cutter. Color coded dies in tool nose correspond to color on terminal insulation sleeve to insure die selection. A stud gauge and wire stripping gauge are important on the tool body. Cushioned handles. P/N 604252-1

## BANTAM ROTA-CRIMP TOOL

The AMP Bantam Rota-Tool crimps uninsulated terminals and splices for No. 8 to 1/0 sizes. The correct die position is selected by rotating dies to correct AWG number. Dies are fixed in tool to avoid loss. Compact, rugged and easy to handle. 15" long. Wt. 5 lbs. Not for certified Aircraft use. P/N 601075

## 3M™ CRIMPING TOOL TH-440

High carbon, heat-treated steel crimping tool that has a unique design that provides a high strength/weight ratio that crimps a broad range of 22-10 AWG terminals and connectors. P/N 12-01146

TO

# TOOLS - CUTTERS



## TWO STEP STUD EXTRACTORS

Our Two Step Stud Extractors are the simplest way to remove broken studs and require only 1/8" of the broken stud for removal. Simply tap stud remover on stud or frozen bolt with a hammer or mallet, and then remove stud by attaching a wrench to the hex portion of the remover. Just hammer on and screw out. Built to last from case hardened steel. Stud Extractors available in sizes listed below.

Part No.	S	P	E	Part No.	S	P	E
76001-76	3/16"			76008-76	5/8"		
76002-76	1/4"			76009-76	3/4"		
76003-76	5/16"			76010-76	7/8"		
76004-76	3/8"			76011-76	1"		
76005-76	7/16"			76012-76	Set 3/16-1/2"		
76006-76	1/2"			76013-76	Set 9/16-1"		
76007-76	9/16"						

## SPOTFACE IT



The Spotface It tool makes a flat spot for screws. This tool is specifically modified to provide rail cap clearance for use on seat rails. Cutter comes with 1/8, 5/32, 3/16 pilots. P/N 05-04429

## THE PRECISION SURE START TOOL

A tool to assist starting a nut onto a bolt in tight fitting areas. Simply screw the nut onto the SureStart tool, place the tool next to the bolt threads and using a small screwdriver or scribe, rotate the nut off of the SureStart tool and onto the threads of the bolt. The aluminum handle may be bent to suit a specific job. It accommodates Sizes: 6-32, 8-32, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20 and 1/2-20 nuts. Constructed with aerospace grade aluminum and hardware. Made in the USA Patent Pending. P/N 12-01360

## TAPER PIN REAMERS

Brown & Sharpe Taper pin reamers for installation of AN385 and AN386 aircraft taper pins. Straight shank, straight flute. High speed steel. No. 596 Straight Flute.

B&S Taper No.	Diameter		Flute Length	Part No.	P
	Small End	Large End			
1	.1974	.3176	2-7/8"	12-01622	
3	.3099	.4510	3-3/8"	12-09900	
	.3474	.5017	3-11/16"	12-10000	
5	.4474	.6145	4"	12-10100	
6	.4974	.6808	4-3/8"	12-10200	

## NYLON FLANGES IN BATTERY BO M O I F I C A T I O N I T

-Improve Starting Performance. -Easier Removal & Installation of Battery. -May prolong life of battery and starter. -Less expensive to modify existing box than to replace. -Compatible with our famous "Low Loss" Cable Its -Eliminate extra connection on outside of the battery box. -Do away with the troublesome braided negative strap.

Experimental.....P/N 11-02892  
STC'd/PMA'd.....P/N 11-02893

## BATTERY TERMINAL TOOL

The Right Tool for the Job. Prevents damage to battery posts. Steel frame, fits battery wing nuts securely. Insulated to eliminate shorting, sparks or possible explosions. Foam grip handle eliminates slipping. Great gift for pilot or mechanic. P/N 12-16200

## OLFA ROTARY CUTTER



Ergonomic 45mm rotary cutter features a unique comfortable handle design for both left- and right-handed use. Features include the dual-action safety lock that allows the blade to be locked open for comfort and closed for safety. Accommodates the Olfa straight, wave & pinking blades. The cutter is a rolling razor blade used to cut fabrics into shapes, strips and pieces. Guaranteed forever. Suggested uses: cut fiberglass, composite materials, delicate cloth, fabric, paper, leather, etc. Rotary Cutter.....P/N 01-00302  
RB45-1 Replacement Blade only.....P/N 01-00300  
RB45-1 Replacement Blade pk of 5.....P/N 01-00301  
Rotary Pinking Blade.....P/N 12-01709  
**Good For:** general quilting, sewing and craft projects. Great for cutting out patterns, reduces fraying. Can be used in industrial applications.

## OLFA STAINLESS STEEL SCISSORS



The Olfa stainless steel scissors (7" overall length) are rapidly growing in popularity in both consumer and industrial applications. Extremely high quality stainless steel blades meet perfectly for precision cutting. The material being cut is held in place by one blade which is serrated, providing positive control. Ideal for use on such varied materials as paper, fabrics, plastic, rubber, & aircraft composites. P/N 01-00303

## OLFA CUTTING TOOLS



**OLFA L-2 CUTTER** - A sure-grip heavy duty cutter which features a ratchet wheel blade lock & an anti slip rubber grip insert. P/N 12-00258



**OLFA NOL-1 CUTTER** - Heavy duty hand setter' utility knife which features a ratchet wheel blade lock. Unique cushion handle provides comfortable grip. Cutter.....P/N 12-00257  
Replacement Blades (5 pack).....P/N 12-00261

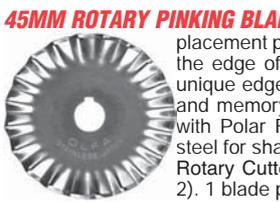


**OLFA H-1 CUTTER** - Extra heavy Duty sure grip cutter features largest blade available, ratchet lock to prevent slipping, rubber grip insert for positive control, and a rope loop to secure cutter to belt or work table. Cutter.....P/N 12-00259  
Replacement blades (5 pack).....P/N 12-00260



## AUTO-LOCK STAINLESS PROFESSIONAL NIFE

Accommodates both left- and right-handed users. Features locking slide blade, stainless steel handle and built-in pocket clip/blade snapper. A perfect steel cutter where rust is a concern. Lifetime Guarantee. Cutter.....P/N 12-00339  
Replacement blades (10 pack).....P/N 12-00340



**45MM ROTARY PINKING BLADE** - 1-pack (PIB45-1) Circular rotary replacement pinking blade designed to place "teeth" on the edge of fabric to reduce raveling and to add a unique edge to any project. Very popular with crafts and memory book development. Also great for use with Polar Fleece This blade is made of stainless steel for sharpness and durability. For Deluxe 45mm Rotary Cutter (RTY-2/DX) and Pinking Cutter (PIK-2). 1 blade per pack. P/N 12-01709

TO

# GENERAL SPECIALTY TOOLS



## CIRCULAR HOLE CUTTER

General's circle cutters produce precision circles in sheet metal, brass, copper, soft steel, aluminum, plastic, wood and composition materials. Bodies are constructed of heat treated tool steel for durability. All Circle Cutters have replaceable pilot points. The replaceable cutter blades are made of high-speed steel for precise and clean cuts. Circle Cutters are adjustable for cutting variable diameter holes. A hex wrench is included for diameter and depth adjustments.

- #4 Cutter..... P/N 12-10600 .....
- Extra 3/16" Blade..... P/N 12-10700 .....
- Pilot Drills for #4 Cutter..... P/N 12-10800 .....



## JEWELERS' SCREWDRIVER KITS

The Screwdriver and Hobby Kit includes five interchangeable blades and a heavy duty knurled handle. Loaded with the most popular jeweler's-sized Slotted and Phillips tips and a scratch awl, this modestly priced set is great for model making and other small-scale applications.

P/N 12-19600 .....



## SWIVEL HEAD PIN VISE

The Swivel Head Pin Vise provides fingertip control of small tools when working with jewelry, electronics or models. The double-ended collet offers two distinct sizes for holding a variety of drill bits, reamers and taps. For added control, this Pin Vise has been design with a knurled aluminum body for a sure grip while the swivel head turns smoothly against your palm. P/N 92.....



## STEEL PROTRACTORS

General's heavy duty steel protractors are trusted by machinists and draftsmen worldwide to deliver crucial measurements with unwavering accuracy. The 6" adjustable arm is ideal for setting bevels, taking measurements and transferring angles. Ultra-fine etched graduations read from 0 to 180 degrees in forward and reverse directions, and will not wear or rub off. Made of ground stainless steel for precision and durability. P/N 17.....



## POCKET CALIPERS

Although small in stature, these 4" Slide Calipers deliver the same accuracy and precision as some of our larger models. The rugged, stainless steel construction, coupled with a compact design makes these Slide Calipers a great addition to any workbench or toolbox. This item provides inside and outside readings in both 1/16" and 1/32" graduations. In addition, there is a decimal equivalents chart on the caliper's back side for help in making measurement calculations. 16ths & 32nds P/N 729 .....

16ths & MM..... P/N 12-01633 .....



## WIRE STRIPPERS & CUTTERS

Just dial the size and avoid damaging wire, especially when used repetitively. Spring opening jaws can be locked in closed position to protect cutting edges. Made of tool steel, equipped with vinyl cushion grip handles. Individually carded. P/N 69 .....



## FEELER GAGES

Blades are made of tempered steel of exacting tolerances. Each blade has its size etched in both decimals of an inch and millimeters. Nickel plated case has knurled locking nut. No. 230 has 26 3x1/2 in. leaves of the following sizes: .0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 in. P/N 230 .....



## REVOLVING PUNCH

This revolving punch is excellent for punching round holes in baffle seal prior to riveting in place. Also works well on leather, plastic, rubber, canvas, & cardboard. Punch sizes: 5/64", 3/32", 7/64", 1/8", 5/32", 3/16". P/N 72 .....

## 6 INCH ELECTRONIC DIGITAL CALIPER

The Thread Repair Files help breathe life back into bolts, screws or fittings that have been damaged due to cross-threading or corrosion. Made of high carbon steel, the Repair Files offer eight different thread pitches. In addition, the Thread Repair Files can also be used as a screw pitch gage. P/N 12-01880 .....



## STEEL RULES

General's industrial quality Steel Rules are precision made with etched fine black graduations for easy reading and long life. The two finishes available are polished stainless steel or satin chrome. Front graduated in 10ths, and 100ths, back in 32nds and 64ths. Quality 12 inch (30cm) flexible stainless steel rule. Precision made. Fine black etched graduations. 6" Long, 15/32" Wide ..... P/N 616 .....

12" Long, 15/32" Wide ..... P/N 1216 .....



## PERMANENT ALNICO MAGNETS

These industrial grade Alnico (Aluminum/Nickel/Cobalt) Magnets are built for heavy duty use and will not naturally demagnetize over time like other magnets. They are handy in a plethora of applications and work settings. The horseshoe-shaped Power Alnico Magnets are available in 2 distinct sizes with extraordinarily strong pull capacities ranging up to 13 lbs. No. 370-1 Pocket Magnet, 3/4 oz., approx. 1 lb. pull P/N 370-1 .....

No. 370-2 Power Magnet, 2 oz., approx. 13 lb. pull P/N 370-2 .....



## WIRE & SHEET METAL GAUGES

**#20 WIRE GAUGE** - The Wire Gage helps you to accurately determine the thickness of American Standard wire from 0 to 36. The Gage works with all non-ferrous wires, metals and rods such as copper, brass and aluminum. This heavy duty tool is made from hardened and tempered steel, and is stamped with wire sizes on the front and their decimal equivalents on the back

**#20 American Standard Wire Gauge** - For gauging non-ferrous wire & metal like copper, brass, aluminum, etc. P/N 12-02384.....



## #21 U.S. STANDARD SHEET METAL GAUGE

- The Sheet Metal Gage is for gauging uncoated sheet, plate iron and steel, based on weights in ounces per square foot. gauge numbers are in U.S. Standard. Numbers 0-36 (.325"-.007"). Made of hardened steel, with a satin finish for easy reading. Decimal equivalents on the back side. Measures 3-1/4" in diameter. P/N 21 .....

## SCREWDRIVER HANDLE SCRATCH AWL



If you're looking for a quality, yet economic awl, then check out our Screwdriver Handle Scratch Awl. Featuring a 3-5/8" steel blade and a durable plastic handle, this Scratch Awl makes a great addition to any workbench of toolbox. P/N 12-01873 .....

## UTILITY AUTOMATIC CENTER PUNCH



The Utility Automatic Center Punch is our most economical model, offering a lightweight aluminum body and a hardened steel point. The punch is great for use on various metals and woods, and is impact adjustable. P/N 12-01874 .....



## TRAMMEL POINTS

General's adjustable trammels accurately measure and mark distances that are too great for conventional compasses and dividers. Trammels will accurately transfer measurements, scribe arcs and lay out circles. Points can be replaced with pencils, ballpoint pens, crayons or soap-stone sticks for marking various materials. P/N 520.....



## DRILL GAUGES

General's Drill Gages help you to quickly and accurately identify the sizes of stray drill bits in your workshop. These gages can be extremely useful with older, unmarked bits or ones that are too small for markings. Each heat treated, heavy steel gage is machined to close tolerance for spot-on accuracy. The bit sizes and decimal equivalents are permanently etched to the face to provide years of dependable use.

Part No.	No.	Description	Price
12-00518	13	Number size drills 61 to 80	.
12-00519	14	Fractional size drills 1/16" - 1/2" x 64ths	.
12-00378	15	Number size drills 1 to 60	.

TO

# GENERAL SPECIALTY TOOLS

## COTTER PIN PULLER



General's Cotter Pin Puller helps you to easily and safely remove steel cotter pins from confined areas. The compound bend design facilitates use of the tool with either a pull or a twist motion. In addition, the heavy duty screwdriver handle provides a familiar, comfortable grip.  
P/n 12-01892.....

## PRECISION MAGNETIZER/DEMAGNETIZER



Our Precision Magnetizer and Demagnetizer transforms standard screwdrivers, tweezers and tool bits into powerful magnetic pickups. This dual-sized device can magnetize screwdrivers for installing small screws in jewelry, or demagnetize a set of tweezers for working with sensitive electronics. In addition, the innovative step design allows you to control the level of magnetism that is imposed upon your tools.  
P/N 12-01890.....

## ARCH PUNCH SET



Our extensive selection of Arch Punches are machined to close tolerances for creating precise holes in gasket material, rubber and soft metals. These industrial-quality tools are hand forged to ensure the longevity and accuracy of the cutting edge. This seven-piece set includes some of our most popular punch sizes and is conveniently packaged  
P/N 12-01891.....

in a vinyl storage pouch.

## INSPECTION MIRRORS



PN 12-01888

PN 12-01889

General's Inspection Mirrors are known for their seemingly limitless uses both around the home and in the shop. For instance, an Inspection Mirror can be used to check behind an armoire for lost keys or beneath an engine block for a missing bolt. The Inspection Mirrors come in a variety sizes and lengths, and feature dual ball-and-socket joints for infinite angle adjustments of the mirror.

PN 12-01887

1-1/4 Diam P/N 12-01887.....  
2-1/4 Diam P/N 12-01888.....  
3-1/2 Oblong P/N 12-01889.....

## 3-PIECE TELESCOPING SPEED-CHUCK INSPECTION SET



Our Speed-Chuck Inspection Sets feature a 26" telescoping wand and an assortment of interchangeable tools including mirrors, magnifiers, LED lights, clips and magnets. Simply pull back on the Speed-Chuck's spring-loaded collar for effortless swapping of attachments. What's more, every Speed-Chuck Inspection Kit comes in a molded zipper case for simple storage.  
P/N 12-01885.....

## TELESCOPING ALLIGATOR CLIP



The Telescoping Alligator Clip is often used as a third-hand tool in electrical repair for holding and positioning wires. It is also commonly employed around the home for lighting pilot lights and barbeques. The extendable shaft reaches up to 24-1/2" for working in cramped areas, or to provide a safety buffer for lighting a gas grill or furnace. The tool condenses to 5-1/2" and is equipped with pocket clip for those on the go.  
P/N 12-01884.....

## 5PC EXTRA LONG DRIVE PIN PUNCH SET



Our Drive Pin Punches have been machined to exacting tolerances for accurate driving without damaging the pin or hole. The punch ends are ground square to sit flush on the top of the pin. Made of hardened tool steel with a knurled body, General's Drive Pin Punches can either be held by hand or with our Punch and Chisel holder. This five-piece set features extra-long 3-1/2" shafts for reaching deeply recessed pins.  
P/N 12-01875.....

## 5-PC PRECISION ULTRAREACH STAR SCREWDRIVER SET SLOTTED & PHILLIPS



Our UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This five-piece set includes Slotted and Phillips screwdrivers in two distinct handle sizes. The color-coded ring on each screwdriver helps you to easily identify the blade type when working arduously in the field.  
P/N 12-01881.....

## 5-PC PRECISION ULTRAREACH STAR SCREWDRIVER SET



Our UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This five-piece Torx set features a great assortment of blades in two distinct handle sizes. The color-coded ring on each screwdriver helps you to easily identify the blade type when working arduously in the field.  
P/N 12-01882.....

## THREAD REPAIR FILE



The Thread Repair Files help breathe life back into bolts, screws or fittings that have been damaged due to cross-threading or corrosion. Made of high carbon steel, the Repair Files offer eight different thread pitches. In addition, the Thread Repair Files can also be used as a screw pitch gage.  
P/N 12-01879.....

TO

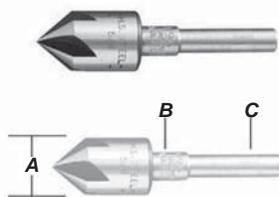
## PRECISION PENCIL COMPASS



The Precision Pencil Compass is a robust scribing and marking tool with a jaw capacity of up to 9". The fulcrum spring handle makes this tool great for making contours, circles and edge marks. A carpenter's favorite.  
P/N 12-01872.....

# GENERAL SPECIALTY TOOLS

## 5 FLUTE ROSE PATTERN COUNTERSINKS



Designed with the perfectionist in mind, our Rose Pattern Countersinks are a must have for any close-tolerance woodworking or machinist project. The 5-flute design reduces chatter and easily pierces steel, brass, aluminum, plastic and wood. The stepped shank

can be used with either a 1/4" or 3/8" chuck.

A	B	C	PN	Price
1/2"	3/8"	1/4"	12-01863	.
5/8"	3/8"	1/4"	12-01864	.
3/4"	3/8"	1/4"	12-01865	.

## 6 INCH CONTOUR GAGE



General's 6" Contour Gage is designed for precise surface duplication in woodworking, fine carpentry and other professional genres. The 35 ultra-thin leaves per inch assure that you are getting an exact replication of your copied shape. The Contour Gage is capable of duplicating surfaces up to 3-1/2" deep. Instructions: 1. Press Contour Gage against surface

to be copied. 2. Trace the formed contour gage onto your cutting material. 3. Cut the material. 4. Fit into place.

P/N 12-01870 .....

## UTILITY TUNGSTEN CARBIDE TIP SCRIBER/ETCHING PEN



The power of our Utility Scriber and Etching Pen is eclipsed only by its affordability. This durable scriber is a terrific pickup for making quick and accurate marks in the hardest work pieces. In addition, the Utility Scriber includes a permanent magnet affixed to the cap for retrieving and cleaning loose metal shavings. P/N 12-01876 .....

## PLAIN TAP WRENCHES



The standard Tap Wrenches are perfect for creating straight and accurate thread holes in your work piece. The fixed T-Handle provides a large gripping surface for generating maximum leverage. This versatile tool can also be used with reamers, drill bits, screw extractors and other hand-turned tools.

Tap Capacity	Length	Part No.	Price
NO. 0 TO 1/4" (1.6 TO 6.3mm)	2-1/4" (57mm)	12-01877	.
NO. 12 TO 1/2" (6 TO 12mm)	3-3/4" (95mm)	12-01878	.

## RATCHET OFFSET SCREWDRIVER



An Offset Ratchet Screwdriver is a useful tool to have on hand as it provides greater leverage compared to a traditional screwdriver. The swift ratcheting motion allows you to remove and install screws with ease, and the offset head provides odd-angle access in obstructed areas. This item features two Slotted screwdriver blades and a reversible ratchet. P/n 12-01883 .....



## PRECISION OILER

Our Precision Oiler is a highly accurate lubrication tool intended for anyone working with small mechanical parts. The needlepoint tip allows for the precise placement of oil in confined areas. The smooth thumb actuator lets you control the release of lubricant from the reservoir in small droplets. In addition, the Precision Oiler includes a screw-on cover and pocket clip for use on the go. P/N 12-01894 .....



## LONG NEEDLE NOSE PLIERS

The Needle Nose Pliers are long and slender in construction, allowing access into both remote and crowded areas. A great retrieval and positioning tool, the Needle Nose Pliers are a staple of hands-on professionals world wide. P/N 12-01886 .....



## 6 INCH FLEX ECONOMY RULER 3/4 WIDE

Our Economy Steel Rules are ideal for a variety of home and office uses, offering the same accuracy you've come to expect from any General tool. Each rule is 6" in length and is offered in five distinct sets of Metric and English graduations. In addition, several of our Economy Steel rules are equipped with pocket clips for use in the field. P/N 12-01133 .....

## REPLACEMENT BLADE OIL CAN CUTTER

General Tool's Gold Standard Cutting Wheels are made from tempered, bearing surface steel for smooth, exact pipe cuts. The slim-line surface geometry ensures fewer inner surfaces burrs and less chance for outer surface distortion. The RW122 is designed for larger capacity cutters on iron pipe and other tough surfaces. P/N 12-01159



## CUTTER PLUG WOODWORKING

General's Plug Cutters produce accurate plugs for covering screw holes in decking, flooring and fine furniture. Plug cutters are great for creating a decorative effect in any woodworking project and can also be used to repair nicks, scratches and dents. Each cutter is made from hardened alloy steel and will fit in both hand-held power drills and drill presses.



- 3/8" ..... P/N 12-01866 .....
- 1/2" ..... P/N 12-01867 .....
- 5/8" ..... P/N 12-01868 .....

## JOGGLE-360 FABRICATION TOOL



Noah Industries has introduced the Joggle-360 into its lineup of innovative metal aircraft fabrication tools. The Joggle-360 will joggle round openings for inspection plates with joggle widths up to 0.562 inch and straight joggle offsets up to 0.625 inch. The tool features hardened steel rollers that form the joggle while gliding

around the opening or along the edge by ball bearings that eccentrically adjust for joggle width.

### Instruction:

1. Adjust the guide rollers to the desired set back or width of joggle by rotating the Eccentric Guide Roller Adjustment Screws with an Allen wrench.
2. Place the Joggle-360 onto the work that you are going to joggle and tighten the Tension Knob.
3. For straight joggles, run the Joggle-360 back and forth along the work tightening the Tension Knob as required until you achieve the desired joggle depth. Jogging a hole is the same process. Be sure to keep the Guide Rollers in contact with the edge of your work.
4. When the joggle is finished, loosen the Tension Knob and remove the tool from your work.

Note: You may need to tighten the Eccentric Lock Screws from time to time in order to keep the Eccentric Guide Rollers from rotating during use. P/N 12-02252 .....

TO

# DRILLS - TAPS - DIES

## AIRCRAFT GRADE SUPER COBALT DRILLS

These super cobalt hi-speed jobber length aircraft drill bits feature heavy duty construction to Type J aircraft specifications. Use to drill hard, tough metals, stainless steels, iron based and titanium alloys, and certain plastics. Hardness of cobalt permits speeds 30% over regular H.S.S. drills. Cobalt drills demand rigidly held, positive feed drilling equipment.

Part No.	Drill Size	Price Ea.	Part No.	Drill Size	Price Ea.
12-04212	42	.	12-04221	19	.
12-04213	41	.	12-04222	12	.
12-04214	40	.	12-04223	10	.
12-04215	36	.	12-04224	"D"	.
12-04216	33	.	12-04225	1/8"	.
12-04217	30	.	12-04226	5/32"	.
12-04218	28	.	12-04227	3/16"	.
12-04219	27	.	12-04228	1/4"	.
12-04220	23	.	12-04229	5/16"	.
12-14221	21	.	12-04235	#35	.

## 12" LONG DRILL BITS

These 12" long drill bits are for use with standard electric drills for the hard to reach jobs.

Drill	Size	Part No.	Price
3/32"	(.094")	12-05200	.
1/8"	(.125")	12-05300	.
3/16"	(.188")	12-05400	.
#10	(.194")	12-05500	.
1/4"	(.250")	12-05600	.

## MALE THREADED DRILL BITS

Male threaded drill bits of high speed steel screw into female spindle of angle drill or snake drill.

Drill Size	10-32 Thread	1/4-28 Thread		
Size	Part No.	Price	Part No.	Price
#10	12-05701	.	12-05702	.
#20	12-05801	.	12-05802	.
#21	12-05901	.	12-05902	.
#30	12-06001	.	12-06002	.
#40	12-06101	.	12-06102	.

## ANGLE DRILL ATTACHMENT

Quickly connects to any drill chuck. Makes a convenient, inexpensive close-quarter tool. 3/16 drill capacity. Specify threaded spindle size: 5/16-24 (P/N 12-18503), 1/4-28 (P/N 12-18501) or 10-32 (P/N 12-18502) .....

Angle Drill w/ Key Chuck (1/4-28 Only).....P/N 12-18511 .....

**ANGLE DRILL KIT** - Includes tool case, 24" flexible attachment, 4 threaded drills, collet adapter, 90° angle drill, straight drill attachment, 4 collet drills. P/N 12-18505 .....

## SNAKE DRILL ATTACHMENT

Heavy-duty 90° flexible drilling attachment. Overall length 26". 3 Female threaded spindle sizes. 1/4-28 .....P/N 12-06500 .....

10-32 .....P/N 12-06600 .....

W/Key Chuck (5/32"cap.) .....P/N 12-06800 .....

## CONE JAW CHUCK

Heavy duty yet mini size fits any angle drill or attachment with 1/4" x 28 threads. It's just what you need for close quarter drilling. Features: •Capacity from 1/16" to 1/4" 3/4" length, 0.13 lbs •Wrench included. P/N 12-00245 .....

## ANGLE DRILL COLLET & CHUCK KIT

This 10-piece kit gives you 3 different methods of drilling in tight spots. Each shank is 1/4" x 28 which will thread into most drill spindles that angle attachments and angle drills are supplied with. 0.25 lb. KIT INCLUDES: • (4) #200 collets & adapters - drill sizes 11, 21, 30, & 40 • (4) threaded drill bits (1-1/4" length) - drill sizes: 10,21,30,40 • (1) Cone jaw chuck Model TP258 .....P/N 12-00368 .....

## HAND THREAD TAPS

There are three basic types of straight thread taps:

**PLUG TAPS** - used for ordinary threading and have a 3 to 5-thread chamfer, or relief, at the point.

**TAPER TAPS** - have 8 to 10 threads chamfered for easy starting and are used for tough threading jobs.

**BOTTOMING TAPS** - with their short chamfer (1 to 1-1/2 threads), are used where the thread must go to the bottom of the hole.

Specify Plug, Taper or Bottoming Tap.

PLUG TAPS			
Die Size	Left-Hand	Right-Hand	
6-32	12-07601	.	12-07701
8-32	12-07801	.	12-07901
10-32	12-08001	.	12-08101
1/4-28	12-08201	.	12-08301
5/16-24	12-08401	.	12-08501
3/8-24	12-08601	.	12-08701

TAPER TAPS			
Die Size	Left-Hand	Right-Hand	
6-32	12-07602	.	12-07702
8-32	12-07802	.	12-07902
10-32	--	.	12-08102
1/4-28	12-08202	.	12-08302
5/16-24	12-08402	.	12-08502
3/8-24	--	.	12-08702

BOTTOMING TAPS (HIGH-SPEED STEEL)			
Die Size	Left-Hand	Right-Hand	
6-32	--	.	12-07703
8-32	--	.	12-07903
10-32	12-08003	.	12-08103
1/4-28	--	.	12-08303
5/16-24	--	.	12-08503
3/8-24	--	.	12-08703

## DRILLING & TAPPING SETS

13-Piece drilling and tapping set made from special high speed steel. Contains 6 screw machine length drill bits (Nos. 43, 35, 29, 25, 21 and 7), 16 NC taps (4-40, 6-32, 8-32, 10-24, 10-32 and 1/4-20) and one tap wrench. Choice of 135° split point or spiral point drill bits. Set with Split-Point Drill Bits. P/N 41095 .....

## ADJUSTABLE ROUND SPLIT DIES

Die Size	Left-Hand	Right-Hand	
6-32	12-07001	.	12-07002
8-32	12-07101	.	12-07102
10-32	12-07201	.	12-07202
1/4-28	12-07301	.	12-07302
5/16-24	12-07401	.	12-07402
3/8-24	12-07501	.	12-07502

## ROUND "KNOCK-OUT" PUNCHES & DIES

Save hours of tedious drilling, sawing, filing and hand-fitting. Produce clean, true holes for sockets, controls, instruments. Cut clean, burr-free holes with these easy-to-use tools. Can be operated by ordinary wrench. One punch required for each hole size.

Punch Size	Model 730 P/N	Price	Model 730 P/N	Punch Size	Price
1/2"	12-20905	.	12-20945	1-3/8"	.
5/8"	12-20910	.	12-20950	1-1/2"	.
3/4"	12-20915	.	12-20955	1-5/8"	.
7/8"	12-20920	.	12-20925	1"	.
2"	12-20970	.	12-20975	2-1/4"	.
1-1/8"	12-20930	.	3-1/8"	12-20980	.
1-7/32"	12-20935	.			
1-1/4"	12-20940	.			

Additional Sizes Available. Drive punches with a ball bearing drive for faster, easier hand operation are available for the 2-1/4" & 3-1/8" knock-out punches.

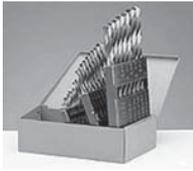
Drive for 2-1/4" Punch .....P/N #304AVBB.....  
 Drive for 3-1/8" Punch .....P/N #1433AVBB.....  
**DISCOUNT: 12 UNITS - LESS 15% (ASSORTED)**

## RAPTOR X81

Gives you the choice of using screw machine drills or threaded shank tools. Three flex collets encompass a range of 3/32-1/4 shank tools. A simple attachment immediately converts the tool to use threaded drills. Recommended to use sQhort screw machined drills for special sizes and metric sizes, which is not possible with threaded series. Features: \* More power \* Greater Torque P/N 12-02251 .....

TO

# DRILL BIT SETS - CARBIDE DRILLS & BURS



## DRILL BIT SET - SIZES 1-60

This jobber length drill bit set includes high speed steel (HSS) drill bits in sizes 1-60. The set comes complete with a steel storage box. Ideal as a pre-drill for tapping of holes and for many other aircraft building applications.

P/N 12-00227 .....



## 29-PC BRITE FLUTE DRILL SET

This 118° point, high speed steel (HSS) drill set performs well in a wide variety of drilling applications. It is recommended for non-ferrous metals, wood, and plastics. Set includes 29 pcs (1/16 to 1/2" in 64ths) in metal index.

P/N 12-00537 .....



## 115-PC HSS JOBBER LENGTH DRILL SET

This 118° point, high speed steel (HSS) drill set performs well in a wide variety of drilling applications. It is recommended for non-ferrous metals, wood, and plastics. Set includes 115 pcs (1/16 to 1/2" by 64ths and #1-60 and A-Z in metal index).

P/N 12-00536 .....

## STRAIGHT FLUTE CARBIDE DRILLS

For use on hardened, treated, and abrasive materials, stainless steel, cryogenic alloys.



P/N	Cutting Dia.	Decimal Equiv.	Flute Length	Overall Length	Price
12-00538	13/64	.2031	1-3/16	2-1/4	.
12-00539	7/32	.2188	1-1/4	2-3/8	.
12-00540	1/4	.2500	1-3/8	2-1/2	.
12-00541	9/32	.2812	1-1/2	2-11/16	.
12-00542	5/16	.3125	1-5/8	2-13/16	.
12-00543	3/8	.3750	1-13/16	3-1/8	.
12-00544	1/2	.5000	2-1/4	3-3/4	.
12-00545	1/8	.1250	7/8	1-7/8	.
12-00546	9/64	.1406	15/16	1-15/16	.
12-00547	5/32	.1562	1	2-1/16	.
12-00551	3/16	.1875	1-1/8	2-3/16	.

## CARBIDE TWIST DRILLS

For use on non-ferrous alloys, cast iron, plastics, aluminum, and highly abrasive materials



P/N	Cutting Dia.	Decimal Equiv.	Flute Length	Overall Length	Price
12-00579	1/16	.0625	3/4	1-1/2	.
12-00580	5/64	.0781	7/8	1-3/4	.
12-00581	3/32	.0938	1	2	.
12-00582	7/64	.1094	1-1/4	2-1/4	.
12-00583	1/8	.1250	1-1/4	2-1/4	.
12-00584	9/64	.1406	1-3/8	2-1/2	.
12-00585	5/32	.1562	1-3/8	2-1/2	.
12-00586	11/64	.1719	1-5/8	2-3/4	.
12-00547	3/16	.1875	1-5/8	2-3/4	.
12-00548	13/64	.2031	1-3/4	3	.
12-00549	7/32	.2188	1-3/4	3	.
12-00552	15/64	.2344	2	3-1/4	.
12-00553	1/4	.2500	2	3-1/4	.
12-00554	17/64	.2656	2-1/8	3-1/2	.
12-00557	9/32	.2812	2-1/8	3-1/2	.
12-00558	5/16	.3125	2-3/8	3-3/4	.
12-00561	11/32	.3438	2-1/2	4	.
12-00563	3/8	.3750	2-3/4	4-1/4	.
12-00564	7/16	.4375	2-7/8	4-1/2	.
12-00567	1/2	.5000	3	4-3/4	.

## ALUMINUM CUT

Designed for use on aluminum, non-ferrous metals, soft steel, reinforced plastics, and other soft materials.

## CYLINDRICAL BALL NOSE CARBIDE BURS

Aluminum Cut. 1/4" shank.



Part No.	Dia.	Flute Length	Price
12-00588	1/4	5/8	.
12-00589	3/8	3/4	.
12-00590	1/2	1	.

## CYLINDRICAL CARBIDE BURS

Aluminum Cut. 1/4" shank.



Part No.	Dia.	Flute Length	Price
12-00591	1/4	5/8	.
12-00592	3/8	3/4	.
12-00593	1/2	1	.

## ROUND NOSE TREE CARBIDE BURS

Aluminum Cut. 1/4" shank.



Part No.	Dia.	Flute Length	Price
12-00594	1/4	5/8	.
12-00595	3/8	3/4	.
12-00596	1/2	1	.

## MEDIUM TOUGH CUT

Engineered specifically for tough applications. Tough cut insures faster, splinter-free cutting in weld & alloy castings with increased tool life.

## CYLINDRICAL BALL NOSE CARBIDE BURS

Medium Tough Cut. 1/4" shank. 6" Long.



Part No.	Dia.	Flute Length	Price
12-00597	3/8	3/4	.
12-00598	1/2	1	.

## ROUND NOSE TREE CARBIDE BURS

Medium Tough Cut. 1/4" shank. 6" Long.



Part No.	Dia.	Flute Length	Price
12-00599	3/8	3/4	.
12-00601	1/2	1	.

## 14° INCLUDED ANGLE CARBIDE BURS

Medium Tough Cut. 1/4" shank. 6" Long.



Part No.	Dia.	Flute Length	Price
12-00602	3/8	1-1/16	.
12-00603	1/2	1-1/8	.

## DRILL DOCTOR TRADESMAN BIT SHARPENER



The DD500X Pro Kit combines the Drill Doctor Tradesman sharpener with heavy duty carrying case. Sharpens bits either 118° or the high performance 135° setting and it can turn standard drill bits into self-centering, split point bits. Sharpens bits from 3/32" to 1/2" diameter in about

60 seconds and includes the patented E-Z align system and diamond grinding wheel for sharp precise results. Includes: Sharpener, 1/2" chuck, 110V power cord, carrying case, free video and easy to follow instructions.

P/N 12-00673 .....

TO

# ABRASIVE TOOLS & KITS

## QUICK CHANGE SANDING & SURFACE CONDITIONING



Power Zirc sanding discs grind down welds and remove sharp edges on all types of metal surfaces. They also apply non-directional finishes to brake rotors, in addition to removing heavy rust and corrosion. Surface Conditioning discs remove baked on gaskets and silicone sealants.

They are also used for deburring and polishing sharp edges, as well as paint and corrosion removal. Roloc® is a registered trademark of the 3M Company. P/N12-00845 .....

Qty.	Description	Application
3	2" Power Zirc, Lockit Style Discs, 36 Grit	Weld removal/heavy stock removal.
3	2" Power Zirc, Lockit Style Discs, 60 Grit	Lighter stock removal.
3	2" Power Zirc, Lockit Style Discs, 80 Grit	Blending of heavy scratches.
3	2" Power Zirc, Lockit Style Discs, 120 Grit	Blending and removal of scratches.
3	3" Power Zirc, Lockit Style Discs, 36 Grit	Weld removal/heavy stock removal.
3	3" Power Zirc, Lockit Style Discs, 60 Grit	Lighter stock removal.
3	3" Power Zirc, Lockit Style Discs, 80 Grit	Blending of heavy scratches.
3	3" Power Zirc, Lockit Style Discs, 120 Grit	Blending and removal of scratches.
5	2" Surface Conditioning Discs, Coarse	Gasket/corrosion removal on steel parts.
5	2" Surface Conditioning Discs, Medium	Gasket/corrosion removal on steel & aluminum.
5	2" Surface Conditioning Discs, Very Fine	Gasket/corrosion removal/scratch blending.
5	3" Surface Conditioning Discs, Coarse	Gasket/corrosion removal on steel parts.
5	3" Surface Conditioning Discs, Medium	Gasket/corrosion removal on steel & aluminum.
5	3" Surface Conditioning Discs, Very Fine	Gasket/corrosion removal/scratch blending.
1	2" Lockit Style Holder Pad with Mandrel	Use with 2" sanding and surface conditioning disc.
1	3" Lockit Style Holder Pad with Mandrel	Use with 3" sanding and surface conditioning disc.

*Roloc® is a registered trademark of the 3M Company.*

## STANDARD PORTING KIT

A very complete Porting Kit, with a large variety of Cartridge Rolls for a complete porting job. Includes Do-It-Yourself Guide.

P/N 12-00842 .....



Qty.	Description	Application
2	1" x 1" x 1/4" Flap Wheel, 120 Grit	For porting intake runners.
3 Total	Rotary Stones, Tapered, 60 Grit, (1) 3/8" Diameter, (1) 11/16" Diameter, (1) 1" Diameter	Removes large amounts of metal in small areas.
7 Total	Cartridge Rolls, Straight, 1/4" Diameter, (2) 40 Grit & (5) 80 Grit	Porting heads and intake runners.
7 Total	Cartridge Rolls, Straight, 3/8" Diameter, (2) 40 Grit & (5) 80 Grit	Porting heads and intake runners.
7 Total	Cartridge Rolls, Straight, 3/4" Diameter, (2) 40 Grit & (5) 80 Grit	For large porting jobs, to remove a great amount of material.
7 Total	Cartridge Rolls, Half Tapered, 3/8" Diameter, (2) 40 Grit & (5) 80 Grit	Remove material in small areas with a greater product endurance.
7 Total	Cartridge Rolls, Half Tapered, 5/8" Diameter, (2) 40 Grit & (5) 80 Grit	Remove material in small areas with a greater product endurance.
7 Total	Cartridge Rolls, Full Tapered, 5/8" Diameter, (2) 40 Grit & (5) 80 Grit	For quick removal of material in small areas of the engine.
1	1/4" Diameter Mandrel, 2-3/4" O.A.L.	Use with Cartridge Rolls.
1	1/4" Diameter Mandrel, 4" O.A.L.	Use with Cartridge Rolls.

## HAND PADS



Faster, cleaner, and more durable than wire brushes, scrapers and sandpaper. Non-woven nylon pads are pre-cut. They provide conformable, consistent finishes. General Purpose and Ultra Fine Pads may be used with lubricants and solvents. General Purpose - Clean up dirty parts in solvent tank • Light corrosion removal on steel

and aluminum parts. Commercial - An aggressive hand pad for water-based products only. •Not to be used with solvents. •Heavy duty rust removal and general cleanup Ultra Fine - For scuffing in new rod and main bearings. • Light corrosion removal on steel and aluminum parts.

Description	Size	Grain	Color	Qty.	Part No.	Price
General Purpose	6" x 9"	A/O	Maroon	60 pack	12-00861	.
Ultra Fine	6" x 9"	S/C	Gray	1 each	12-00862	.
Commercial	6" x 9"	A/O	Green	40 pack	12-00863	.
Heavy Duty	6" x 9"	A/O	Tan	40 pack	12-00864	.
Hand Pad Holder	-	-	Orange	1 Hand Pad Holder, 4 Sanding Pads	12-00865	.

## BENCH GRINDER DISCS



Quickly remove carbon from pistons and valve stems. Great for light deburring head bolts and studs. One disc is flexible when run alone. Stack as many discs on at a time for the desired finish and removal rate. Safer than a wire wheel, with a much better finish. The very fine grade Bench Grinder Discs are packaged 10 to a pack, and the medium grade Bench Grinder Discs are packaged 5 to a pack.

Size	Grain	Grade	Max RPM	Part No.	Price
6" x 1/2"	A/O	Very Fine	3,600	12-00847	.
6" x 1/2"	A/O	Very Fine	3,600	12-00848	.
8" x 1/2"	A/O	Very Fine	3,000	12-00849	.

## METAL POLISHING KIT



An easy way to polish chrome, aluminum and brass with an electric drill motor. Includes: 4 Felt Discs, 1 Holder Pad, 1 1/4" Mandrel  
Metal Polishing Kit (2" Dia.)..... P/N 12-00843.....  
Metal Polishing Kit (3" Dia.)..... P/N 12-00844.....

## DEBURRING AND FINISHING WHEELS FOR HAND GRINDERS



These abrasive nylon Deburring & Finishing Wheels for hand grinders are very aggressive for metal removal and deburring. They produce a satin-textured finish. New abrasive grain is exposed throughout the wheel's wear, for a consistent quality finish. High Durability - The 1"x1" x 3/16" mini wheel is excellent for deburring and blending. • Used with our Cartridge Rolls for porting, our mini wheel supplies a smooth satin finish to ported heads and the intake manifold. • Increases edge life. • Resists loading - smear resistant for uniform final finish. • Conforms to work piece. • Prevents undercutting or gouging.

Size	Density	Grain	Grade	Max RPM	Part No.	Price
1"x1"x3/16"	Soft	A/O	Medium	30,000	12-00851	.
1"x1"x3/16"	Soft	A/O	Fine	30,000	12-00852	.
1"x1"x3/16"	Soft	S/C	Fine	30,000	12-00853	.
1"x1"x3/16"	Medium	A/O	Fine	30,000	12-00854	.
1"x1"x3/16"	Medium	S/C	Fine	30,000	12-00855	.
1"x1"x3/16"	Hard	A/O	Coarse	30,000	12-00856	.
1"x1"x3/16"	Hard	A/O	Medium	30,000	12-00857	.

## METAL POLISHING KIT



Save time and money with this generous assortment of our most popular types and grits of Straight Cartridge Rolls, in Coarse, Medium and Fine grades. Keep these Cartridge Rolls in your shop for a variety of hard-to-reach applications. Essential tools for engine porting, including intake manifold, heads and exhaust manifold. Kit includes 1/4", 3/8" and 1/2" cartridge rolls, in 40 and 80 grit, and mandrels. Metal Polishing Kit (3" Dia.)

P/N 12-00846 .....

TO

# WISE GRIPS - UNIBITS



Locking Pliers,  
two straight jaws



Locking Pliers,  
two curved jaws



Locking Nose Jaw  
with wire cutter



"C" Clamps



12 LC Large Jaw  
Locking Pliers

Vise-Grip Style	Size	Part No.	Price
Locking Pliers with Two Straight Jaws	7"	12-00196	.
Locking Pliers with Two Curved Jaws and Wire Cutter	4"	4WR	.
	5"	12-00194	.
	7"	12-00189	.
Long Nose Jaws with Wire Cutter	4"	12-00190	.
	6"	12-00192	.
	9"	12-00198	.
Locking "C" Clamps	6"	12-00188	.
	11"	12-00195	.
Large Jaw Locking Pliers, Opens to 3-1/8"	12"	12-00197	.

## TIGHT-FIT DRILL KIT

Space, every inch of it, is at a premium in aircraft design as shape and weight is critical to function. Also, airplanes are riveted together which requires thousands of holes to be drilled in difficult locations without scratching or marring the work surface. So, engineers needed to design a versatile "chuck-less" drill attachment that could reach into very confined areas. The answer was found in putting threads on the shanks of drill bits. The benefits are significant. Threaded drill bits eliminate the need for a chucking mechanism. Freed of this restriction, it is possible to do a wide variety of jobs in places with extreme space limitations (less than 1" x 2"). Chuck slippage is all but eliminated while the precision mating angle between threaded drill and drive spindle insures concentricity. Drill bit change times are reduced, an exact working drill bit length is insured and the chance of marring or scratching the work surface is greatly reduced. The Model 00105 Kit includes: a versatile close-quarter Right Angle Drill Attachment capable of drilling up to 1/4" diameter holes and compatible with all standard power drills, a 6" Threaded Extension for those deep hard-to-reach spots, a Chucking Spud which allows direct use of threaded TightFit® drill bits and extensions with your standard drill motor, five aircraft quality threaded TightFit® drill bits (Short Drill Bit Set, 00133), a Tight Fit® 3-Way Wrench, and is packaged in a red, heavy-duty, blow-molded storage case. Features: Attaches to any power drill; Recommended operating speed not to exceed 2500 rpm. • Light weight; Right angle drill weighs 1/3 of a pound and rotates 360 degrees for tight-spot access. • Threaded components allow for fast, easy tool changes; Drill over, under or around obstructions. • Design allows "deep reach" in confined areas; Provides utility of extension drill bit set.

P/N 12-01334.....

### ACCESSORIES

- Stub Drill Kit** - 5 Drills 9/16" long in 3/32", 1/8", 5/32", 3/16", 1/4" Dia. P/N 12-20310.....
- Short Drill Kit** - 5 Drills 1-1/8" long, in same diameters as above P/N 12-20320.....
- Long Drill Kit** - 5 Drills 2" long in same diameters as above. P/N 12-20330.....
- Screwdriver Set** - #1 & #2 Phillips bits, small & large slotted bits. P/N 12-20340.....
- Extension Set** - 4 Extensions in 1/2", 3" 6" & 9" (can be combined for a work length of 18") P/N 12-20350.....
- Collet Adapter** - Designed to hold all 1/4" shank accessories (countersinks, rotary files, sanding drums). P/N 12-20360.....

## DELUXE TIGHT FIT TOOL KIT PROFESSIONAL MODEL

Includes right angle drilling attachment, 6" extension rod, chucking spud, threaded countersink, (6) stub drill bits (9/16" long) & (6) short drill bits (1-1/2" long) in the following diameters: 1/16", 3/32", 1/8", 5/32", 3/16", 1/4". (1) threaded apex socket adapter to fit the angle head & extension rod. (4) screwdriver bits Number 1 & 2 slotted and Number 1 & 2 Phillips. (1) 1/4" threaded collet adapter to fit the angle head, extension rod or spud adapter. (1) 5/16" combination wrench. All above items are packed in a hard blow molded "everything in its place" aircraft mechanic style carrying case. The case even floats when fully packed. There is also a special internal tray for other drills or accessories.

P/N 12-11215.....



## UNIBIT CARBIDE HOLE CUTTERS

Unlike ordinary hole cutters, Unibit Carbide Hole Cutters cut without hogging, chattering, or vibrating. The aggressive carbide cutting edge holds sharpness for long life. Use them to cut clean, perfectly round holes through steel, stainless steel, aluminum, brass, copper, and many other materials. No center punch is required, and the double ended pilot drill allows for longevity and durability. Available in 16 sizes. Shank size on Hole Cutters 3/4" through 1-1/16" is 3/8", and on cutters 1-1/8" to 1-3/8" shank size is 1/2".

Hole Size	P/N	Price	Hole Size	P/N	Price
7/8"	12-03715	.	1-3/8"	12-03750	.
			2-1/8"	12-03775	.

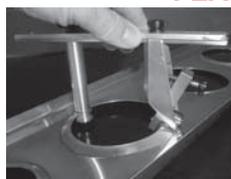


## BLAIR HOLE CUTTER

The Blair hole cutter fits any 1/4" drill and set includes 7 blades (1/4" to 5/8" arbor), pilot and holder. The blades are threaded onto arbor and precise control of the depth of cuts is provided by adjusting screws. Over 3000 holes in sheet metal can be cut by each blade.

Model TP147 ..... P/N 12-00243.....

## FLANGING-360 TOOL



This is a companion tool to the ARC-360 lightning hole cutter. The Flanger-360 will form a 30 degree flange on 2024-T3 aircraft aluminum up to .032" thick and in diameters from 2 to 6 inches. Its polished hardened steel rollers gently and effortlessly form the flange as the operator rotates the tool around the lightning hole.

Unlike other flanging tools that rely on the skill and eye of the operator, the Flanger-360 stays in constant position with the lightning hole via guide rollers as it progressively forms the flange.

P/N 12-02030.....

## UNIBIT STEP DRILL



The UNIBIT Step Drill uses a unique single flute design to drill perfectly round holes in thin materials quickly and with less effort than any other bit on the market today. UNIBIT incorporates cutting steps of progressively larger diameter, making it possible to drill up to 13 different hole sizes with a single bit. Once the desired hole diameter is obtained, the hole is automatically deburred by the cutting edge of the next larger step. UNIBIT #1 drills 13 holes in 1/32" increments from 1/8" through 1/2" and has a shank size of 1/4". UNIBIT #2 drills 6 sizes of holes from 3/16" through 1/2" and has a 3/8" step thickness with a 1/4" shank. UNIBIT #3 drills 9 sizes of holes from 1/4" to 3/4" and has a step thickness of 1/8" with a 3/8" shank.

- UNIBIT #1 Step Drill ..... P/N 12-03700.....
- UNIBIT #2 Step Drill ..... P/N 12-03800.....
- UNIBIT #3 Step Drill ..... P/N 12-03900.....

TO

# SHEARS - NIBBLERS

## QUICK GRIP BAR CLAMPS



From the makers of Vise-Grip tools comes the amazing new Quick-Grip bar clamp. The unique pistol-grip handle lets woodworkers hold the clamp and adjust jaw pressure with just one hand. One finger unlocks the Quick-release trigger. Features include positive locking action to hold work tight, strong, lightweight high-tech construction, instant adjustable clamping pressure, large, pliable pads that won't mar work, and a variety of jaw openings. It will "single-handedly" change the way you think about bar clamps!

Part No.	Jaw Opening Size (mm)	Price
12-03910	6"/150	.
12-03920	2"/305	.
12-03930	18"/455	.

## MICROMETER



For measurements of 0-1", with .001" graduations. Precision-ground hard steel faces. Direct-feel thimble with friction stop and lock nut. Dull chrome finish throughout with black graduations. Decimal equivalents on frame. Zero adjustment requires no wrench. Guaranteed accuracy .0005 P/N 12-01156.....

## LONG REACH PLIER KITS



(3) pieces for access into the most demanding applications. Each plier has a full 11" reach. Medium carbon steel, hardened, fully polished. Cushion PVC handles. Leather storage pouch. Model TP942.....P/N 12-00364.....

## HOLE DUPLICATORS (DRILL BUSHING TYPE)



Provide an accurate means of drilling duplicate matching holes in over-lapping sheets. Hole to be duplicated is drilled through bushing when pilot is in place..... ea

Part No.	Pilot & Drill Size	Part No.	Pilot & Drill Size
AT532-61 #40	(.098")	AT532-63 #21	(.159")
AT532-62 #30	(.129")	AT532-65 #10	(.194")

## DRILL STOPS



Lock on drill with set screw. Regulate hole depth, cushion the breakthrough. Eliminate surface marks & reduce drill breakage.

#40 Drill	P/N 12-08800	.....
#30 Drill	P/N 12-08900	.....
#28 Drill	P/N 12-09000	.....
#21 Drill	P/N 12-09100	.....
#20 Drill	P/N 12-09200	.....
#12 Drill	P/N 12-09300	.....
#10 Drill	P/N 12-09400	.....
1/4" Drill	P/N 12-09500	.....

## ANGLE DRILL



One of the smallest angle head designs for close-quarter drilling operations. Made in USA. Features: • 2800 rpm • 90° angle head • Rear exhaust • 1/4" drilling capacity • 59/64" angle head height • 1/4"-28 threaded spindle • 12-5/8" length • 78DB P/N 12-00241.....

## ADEL HAND "NIBBLING" TOOL



Cuts sheet metal like punch and die. Cuts holes to any size and shape. Start with 7/16" hole then "nibble" to size required. Capacity 18 Ga. steel. Wt. 8 oz. P/N 12-10400..... Replacement Punch..... P/N 12-10500.....

## CUSHIONED CABLE CLAMP (ADEL CLAMP) INSTALLATION PLIERS



These special pliers allow for greatly simplified installation of single or multiple Adel type cushioned clamps. The pliers securely hold the aligned clamps in position, allowing for easy installation of securing hardware. Each kit includes special plier, alignment awl, and simple instructions. P/N 12-02017.....

## KETT PORTABLE POWER SHEARS



**ELECTRIC MODEL K-200** – Extra-powerful 115V, 50/60 cycle AC/DC motor. Heavy-duty bearings & die-cast aluminum cutting head. Tool is UL and CSA approved. 2300rpm. Maximum cutting speed, 180 inches/minute. Wt. 5 lbs. Over-all length, 11.75". Ampere rating, 2.2 amps. P/N 12-01137.....

**ELECTRIC MODEL K-442** – Kett's all-purpose 16 gauge power shears cut up to 16 gauge mild steel, cleanly and easily, without burring or buckling the material. These lightweight shears, designed for durability, feature a variable speed motor and fill the gap between Kett's light duty and heavy duty power shears. P/N 12-01153.....

**PNEUMATIC MODEL P-500** – Equipped with air-metering trigger for variable-speed cutting, so that initially the blade can be operated slowly to prevent chattering at start of cut. 2600rpm. Maximum cutting speed, 180" per min. Wt. 3 lbs. Over-all length, 9". P/N 12-01158.....

## KETT KB-301 CORDLESS 18GA SHEAR



Kett's powerful 14.4 volt Cordless Shear gives you complete freedom in the shop. Its high torque 2300 SPM motor lets you easily cut 18 gauge mild steel or up to 20 gauge stainless at over 150"/minute. The swivel head gives you precise control as you make straight or contour cuts. The double-cut shearing action leaves a clean burr free edge and won't warp or bend the piece. The lightweight hi-impact thermoplastic housing and aluminum cutting head keep weight down to only 7 lbs. The extended run time NiCad battery recharges quickly and there's room for a spare, and the charger unit, in the handy carrying case. Length: 12-3/4", Weight: 7 lbs.

The kit includes the KB-301 power shear, KB-302 14.4 volt NiCad High Performance battery. KB-303 battery charger and KB-304 carrying case.

Model No.	Description	Part No.	Price
KB-301-K	Cordless Shear Kit #300	12-00117	.
KB-302	14.4 volt NiCad Battery	12-00118	.
KB-303	One Hour Battery Charger	12-00119	.
KB-304	Carrying Case	12-00121	.

## KETT KD440 14GA POWER SHEARS



This lightweight, pistol grip shear cuts 14 gauge mild steel and most grades of stainless to 16 gauge. Double insulated, the KD 440 cuts over 150 inches/minute, leaving a clean, flat sheet, ready to fabricate. Distortions are absorbed in an easily disposed of waste curl, leaving the sheet cool and free of burn, chips, and burrs. The cutting blades are finest high speed steel. (Also cuts sheet metal, Stainless and Plastics) P/N 12-00676.....

TO

# TOOLS

## AMP PRO CRIMPER II HAND TOOL

The PRO-CRIMPER II Hand Tool provides the versatility of general-purpose service tools along with the reliability and ease of use of many premium-grade tools. For versatility, 75 die sets (available separately) are interchangeable, including those for open-barrel contacts and terminals. Additionally, many of these die sets have multiple cavities for crimping a variety of contact or terminal sizes. For reliability, the tool is constructed of durable high carbon steel with extra-strength pivot pins. And, for user convenience, the PRO-CRIMPER II Hand Tool particularly excels. Ratchet control is provided for complete crimp cycling; this helps eliminate partial crimps. Also, an emergency ratchet release allows the user to open the tool jaws at any time during the crimp cycle. To reduce handle force, the linkage was designed to match the forces required to crimp our largest insulated terminal. The result is dramatically less hand force than comparable tools. Also, the angled had and specially designed handles provided comfortable operation. Locator are mounted on pin-and-socket style tools. They help properly locate the contact in the die set, provide a wire stop, and help minimize contact rotation and bending during crimping.

- PROCRIPIPER II 58433-3..... P/N 12-01379.....
- O-CRIMP DIE 58435-1..... P/N 12-01380.....
- HEX CRIMP DIE 58436-1..... P/N 12-01381.....
- PIN & SOCKET 58495-2..... P/N 12-01382.....

## KOUL SINGLES STAINLESS BRAIDED HOSE ASSEMBLY TOOLS

Since the invention of stainless braided hose, racers and mechanics have been fighting the problem of installing it into the socket part of the assembly. If your lucky and get a clean cut on the end of that hose, you might get it in. Most of the time a little fuzz appears on the hose end and the battle begins. It is not only time consuming, it can get bloody. This tool is the solution that makes the assembly a snap. Manufactured of a high tech composite, it is virtually indestructible. No need to worry about vise marks or wearing out. Just insert the socket into the tool, twist the hose in, and in less than 10 seconds you have it assembled. You can repeat this several times without recutting the hose end. The tool can pay for itself the first time you don't have to scrap some hose because it got too short trying to clean up the end. You'll be amazed at the amount of time you'll save.

**SMALL KIT** - The Small kit contains the capsules to install -4, -6, -8 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up the some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit in the funnel. The two spacers are used in some -6's and 8's. If the socket seems loose in the tool, use a spacer to tighten it up. In the small kit, only the Russell -4 needs a sleeve. Not for use with Teflon-style hose.  
PN 12-01061.....

**LARGE KIT** - The Large kit contains the capsules to install -10, -12, -16 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit into the funnel. In the 1016 kit, all the -16's except Russell's require the sleeve and a rear spacer. See the instructions in the case for the proper spacer number. Most of the -10's and 12's\* will use a spacer. Not for use with Teflon-style hose. \* -12 is a stainless washer.  
PN 12-01062.....

**HOT ROD KIT** - The Hot Rod kit contains the capsules to install -6, -8, -10 hose into their respective sockets. To accommodate all the different manufacturer's fittings, spacers and sleeves are required to tighten up some of the sockets within the capsule. For the tool to perform at its best, the socket needs to be a snug fit into the funnel. Spacers are used in some -6's, -8's, and most -10's. If the socket seems loose in the tool, use a spacer to tighten it up. See the instructions in the case for the proper spacer number. Not for use with Teflon-style hose.  
PN 12-01898.....

**THE PRO COMBO** - The Pro Combo is a special offer of BOTH the #468 and #1016 kits listed above. Pros need both kits to handle all the hose sizes in a race car. Ordering this combination will save \$15.00. Not for use with Teflon-style hose.  
PN 12-01897.....

## KOUL SINGLES

- 6 Koul Single..... PN 12-01928.....
- 8 Koul Single..... PN 12-01929.....
- 10 Koul Single..... PN 12-01930.....



## P-KIT AIRCRAFT WINDOW INSPECTION PRISM KIT

The "P-KIT" (Inspection Prism Kit) is packaged as a completely self contained aircraft window inspection tool kit. It comes in a waterproof lockable case and includes Instructions, Inspection Prism, Coupling Agent and a 6000 Candlepower Flashlight with batteries. It's ready to use to inspect your aircraft windows for possible bolt hole damage. If the "P-Kit" Prism becomes scratched with use, simply sent it back to the factory and they will refinish it for you free of charge.  
P/N 12-01333.....

## EXPRESS PORTABLE AIRCRAFT VACUUM



The Express Toner/ESD Vacuum provides .3 micron filtration which captures particles that are less than one one-hundredth the thickness of a human hair. This means these vacuums will do a thorough job of cleaning planes of the smallest particulates like mold spores, chemicals, foreign substances or any other microscopic particles that could be hazardous on a plane. Additionally its light weight (about 6 pounds) makes the Express Vacuum easy to move into and around the interior of an airplane. Plus it is the only product in the market of this nature which is ESD safe, this is of great importance given all the delicate electronic equipment which is found on today's airplanes. Note: Bag is optional and may be purchased separately. Features: 600 Watt Flow Through Motor • 6' ESD safe hose • Crevice tool and brush • 12" Flexneck tool • .3 micron toner cartridge filter • Line filter • 12' power cord • ESD SAFE

Toner/ESD Vacuum 110V..... P/N 12-01058.....  
Toner Toner Filters 2 Pk..... P/N 12-01059.....  
Vacuum Carring Bag..... P/N 12-01454.....

## THE SPINNING RATCHET



This tool is a combination tool providing a ratcheting action for power and a spinning action for speed. All types of accessories can be used with this wrench, such as extensions on either end, or flexible drives. With out the spinning handle attached, it is a very compact tool for restricted areas. The ratchet pawl is made from annealed steel to allow it to fail before the ratchetgear as it is a low cost item. The spinning gears are protected by a shear pin that will fail before the bevel gears, again a low cost item, replacement, rather than replace one or both of the bevel gears, if they become over loaded. The tool is 3/8" drive. Use your socket accessories, if you do not have a spinning handle purchase one when you buy your new tool.  
P/N 12-00742.....

Adapter set..... P/N 12-01601.....

## KEYLESS DRILL CHUCK



This 3/8 inch square drive works well with the Spinning Ratchet(tm) and with other socket drives; such as the ratchet wrenches, flexible drives, u joints and extensions. Just the tool for getting into tight spaces to tap or other work that requires turning a tool. .... P/N 12-01387.....

## ELECTRIC TOOL ADAPTER



3/8" Drive, 3-inch, locking adapter for electric tools  
P/N 12-01706.....

# WRENCHES - PLIERS - FEIN MULTIMASTER

## FULLY RELEASING TORQUE DRIVER



The MD1F35H is an adjustable driver with a range of 5 to 35 lb. in. Body is constructed of steel and anodize aluminum, has a CNC machined knurled grip and 1/4" male drive and comes packaged in a plastic box. The MDP1F35 is a preset model ideal for repetitive assembly operations. P/N 12-00530

## DIAL TYPE TORQUE WRENCH



Dial Type Wrenches provide unmatched reliability, accuracy and durability for applications where torque measurement is extremely critical. Models feature a memory pointer that indicates the highest torque achieved during application of torque. 2% accuracy clockwise and counter-clockwise. All wrenches are made in the USA of all steel construction for the highest quality. Both models come with a plastic storage box and a calibration compliance certificate.

3/8" sq.dr. / 300 lb.in. ....P/N 12-00531  
3/8" sq.dr. / 600 lb.in.-50 lb. ft. ....P/N 12-00532

## MICROMETER ADJUSTABLE CLICK WRENCH



Engineered, precision bearing surfaces extend the calibrated life of these micrometer torque wrenches to as many as 60,000 cycles or more and ensure the most reliable performance possible. In addition to flawless operation at release, calibration is completely external, unlike traditional mechanism that require disassembly and the replacement of blocks and shims. Both models come with a plastic storage box and a calibration compliance certificate.

3/8" sq.dr. / 30-200 lbs. ft. ....P/N 12-00533  
3/8" sq.dr. / 20-100 lbs. ft. ....P/N 12-00534

## TWISTED STRIPPER TWISTED SHIELDED PAIR WIRE PREPARATION TOOL



STP Wire Stripping Problem Background: From the beginning, Mil-Spec Tefzel Shielded Twisted Pair wire has defied every wire stripper available to installers, leaving a razor blade or knife as the best option for removing the outer jacket. This time consuming method is imprecise, and it can easily lead to internal shorts between the center conductors and the shield, especially when solder sleeves are used for shield termination. With the increased use of RS-232, ARINC 429, and other types of data busses in today's aircraft electronics, this type of wire is now a major component of many avionics installations. Stop the Razor's Hidden Damage Ring and slit. That has been the standard way to remove twisted pair jackets since the introduction of this type of wire. This time consuming and inaccurate process has obvious disadvantages when compared to the TS-7000:

There is FINALLY a tool to quickly strip the shielded twisted pair wires in your avionics installations!

The TS-7000  
Wire Stripper Advantage

P/N 12-02031

## COMPOUND JOINT HOSE PLIERS



Compound joint allows access in long narrow openings with minimal handle movement. Flush-riveted joints contribute to the tool's narrow profile. Red vinyl grips for comfort & control. Chrome vanadium material for durability & corrosion resistance. 8mm Pliers .....P/N 12-01344  
12mm Pliers .....P/N 12-01345  
18mm Pliers .....P/N 12-01346  
All 3 Set Pliers ...P/N 12-01347

## LONG REACH COMPOUND JOINT PLIERS



Easily access long narrow openings with minimal handle movement. Longest narrow reach available  
13.00" .....P/N 12-01339  
12.75" .....P/N 12-01340  
12.62" .....P/N 12-01341  
All 3 Set .....P/N 12-01342



## ACCU-TAP PRECISION SET

Accu-Tap delivers professional results with every use. Align Accu-Tap using the specially designed sight gauge. The high visibility cross hairs ensure that you will not miss your mark. The v-block makes it easy to drill round stock and tubing and also works on any flat surface. With a flip of a switch, 180 pounds of force is activated in the unique magnetic base securing the guide in the exact location that you need.

Simply select the desired drill bushing and insert into Accu-Tap's locking liner. Grab your favorite drill and see the results unfold. Accu-Tap delivers results within .001".

P/N 12-01871



## FEIN MULTIMASTER SPEED START

For beginners, who do not want to sacrifice professionalism in spite of being price conscious.

### Includes:

- 1 FEIN MULTIMASTER FMM 250
- 1 universal E-CUT saw blade (29mm)
- 5 of each type of sanding sheet, grain 80, 120 and 180
- 1 universal E-CUT saw blade (29mm)
- 1 rigid stopping knife
- 1 key and mounting bolts

### Features

- FEIN MultiMaster Start - a fully-fledged FEIN MultiMaster, suitable for all applications, featuring the most important accessories for grinding, sawing and scraping.
- In the lead through oscillation technology: unsurpassed versatility.
- Optimum handling thanks to ergonomical design and low weight
- Chuck with form-fitting mount provides high torque transfer.
- Powerful 250 Watt motor with electronic speed control.
- Integrated interface for adaptation of additional system accessories.
- Extensive range of accessories available

P/N 12-01853

## ROTOWRENCH — 8 SIZES IN 1



RotoWrench provides 8 sizes in one prostyle box wrench. Change sizes in seconds with unique "spin lock" design. Features 12 gripping teeth to prevent rounded corners, 30° swing arc for tight clearances, slim profile makes RotoWrench easy to store, and hardened chrome-moly steel for lifetime service. Great for working on aircraft, autos, RV's, trucks, bicycles, ATV's watercraft, motorcycles and at home. Lifetime warranty.

MODEL 10M - includes 8 most common metric sizes: 8, 10, 12, 13, 14, 15, 17 & 19 mm P/N 12-00523

## HOSE PINCH-OFF PLIERS



Great for radiator and heater hose, vacuum and fuel lines. Tested to 50,000 cycles without failure for reliable performance. Patented clamping mechanism - No adjustment needed -- Simply squeeze to lock Cushion handgrips for comfort and control. Available in three sizes. Made in U.S.A.

Hose Pinch-off Pliers 1-1/4" OD Cap. ....P/N 12-00524  
Hose Pinch-off Pliers 2-1/2" OD Cap. ....P/N 12-00525  
Hose Pinch-off Pliers 3/4" OD Cap. ....P/N 12-00526



## HOSE CLAMP PLIERS

Specially designed for applying and removing spring hose clamps. The recesses in the jaws grip the ends of the spring so it cannot slip or twist. Grips with either end or side of jaws for reaching into tight places.

P/N 12-01154

## BOLT INSERTION TOOL



This tool allows you to put bolts in tight areas. The tool was designed to install the bolts in an aircraft elevator, however this tool has many other uses. The tool is 1/2" wide 5-3/4" long with a 3-1/2" reach. It can be used for fasteners from #6 to 5/16" diameter. The tool is made of 100% stainless steel for strength and appearance.

P/N 05-04384

TO

# SAFETY WIRE TWISTERS - SAF-T-BLOKS

## MILBAR SAFETY WIRE TWISTERS

 Three-In-One Tool: Pliers, twist-ers and cutters. Used on wire sizes .060" or less. Grips wire into 30° slip proof angle. One-hand operation. Squeeze, press button and it locks. Squeeze again and it unlocks. Made in USA.

With Manual Return		
Description	Part No.	Price
Standard Nose - 9" Long	12-00915	
Diagonal Nose - 9" Long	12-02019	
Tapered Nose - 6" Long	12-00917	
Diagonal Nose - 6" Long	12-00914	
With Automatic Return		
9" Long	12-00916	

## MILBAR WIRE TWISTERS MODEL 25W & 26W

 Milbar is the world's leading brand of Wire Twister Tools and Kits. Designed for the professional mechanic, Milbar forgings are made from high carbon alloy steel and are controlled throughout the manufacturing process to exacting engineering specifications. Each tool passes a series of rigorous quality assurance tests which ensure function and reliability under the most demanding environments. (Black oxide finish) TYPES AND STYLES - Wire Twisters come in 6" Diagonal Configuration. The 25W model incorporate a Cushion Throat to catch clipped wire ends, preventing FOD (foreign object damage). The Spring Return feature automatically retracts the twist rod to ease and speed the work.

25W-NOM Size 6" ..... P/N12-01631 .....  
26W-NOM Size 9" ..... P/N 12-02018 .....

## ECONOMY SAFETY WIRE TWISTERS

 These top quality twisting lock pliers with automatic return are economically priced and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire. Length 9". Foreign made.  
P/N 12-18900 .....

## SAFETY WIRE TWISTER KIT M300

 Contains 6" Safety Wire Twister and 19" Chrome Adjustable Safety Twister Tool with Durable Plastic Case  
P/N 12-01680 .....

## MILBAR 105W PROFESSIONAL WIRING KIT

 The most versatile kit available. Contains three different SafetyTwist® Pliers to cover almost any application: 9" Automatic (1W393), 6" Mini (9W) and a 19" Deep Reach Twister (13W). Includes three 1/4 lb. spools of stainless steel safety wire (.020, .032, .041). Durable plastic storage case. Kit weight 4 lbs.  
P/N 12-02020 .....

## MINI SAFETY WIRE TWISTERS

Same quality construction as T-3000 twist-ers above, but in small 6" length. Ideal for operation in confined spaces. P/N 12-18910 .....

## 19" DEEP-REACH TWISTER EXTENSION

 P/N 12-16640 .....

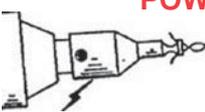
## SPECIALTY TWISTER

 An excellent tool for different access situations, this twister provides a deep reach and access to close quarters. Made in U.S.A.  
P/N 13W .....

## SAFETY WIRE TOOL MFG BY ACS PRODUCTS CO.

 Easy one-hand operation. Reaches into tight places, makes a fast, neat twist. Shatterproof plastic handle.  
P/N 12-01072 .....

## POWER TWIST ADAPTER

 This new tool attachment provides quick and precise twisting of safety wire using Skill or Black & Decker type cordless screwdrivers. Just attach the adapter to the screwdriver, insert wire and you will have a neat, tight, easy wire twist. Works perfectly in a wide variety of applications (particularly twists in tight spaces). Available exclusively from Aircraft Spruce & Specialty Co.  
P/N 12-20800 .....

## SAFETY WIRE DRILLING JIG

 This tool provides a fast, simple way to drill bolt heads with virtually no broken drill bits. The tool is made of 6061T6 hard anodized aluminum for durability. Fits 3/16" to 5/8" dia. bolts and works on hex head bolts, header bolts, 12 point countersink and Allen head cap screws. Includes drill bushings and two cobalt drills.  
P/N 12-16600 .....

## "CENTER IT" HOLE DRILLING JIG

 "Center It" is a jig used to drill holes in pipe or tube stock. To use the Center It, simply place it on your drill-press table, run the bit down (with the motor off) to hold the centered jig on the bit, then bolt the jig to the press table. No clamping of the tube is necessary; the angled flats of the jig hold it in a centered position. Your holes are automatically centered on the tube with no center-punching necessary. If the tube is too fat to drill in a single operation, simply turn it over. The device is useful to kitplane builders who have to drill several holes in a single tube or many tubes because no clamping or center-punching of the tube is required. It also makes short work of drilling.  
P/N 12-20815 .....

## SAFETY WIRE STARTER KIT

 This handy kit enables you to safety wire any nuts or bolts on an airframe or engine. Just place the special washers under the bolt or nut, bend up the small flanges to hold the bolt or nut in place, and then use the tab of the washer to attach the wire to a solid point so the bolt cannot move. This kit works on the same principle as drilled bolts do and is very handy for those flying with an engine that does not have safety wired nuts and bolts. Excellent for use on 2 stroke engines. Package of spare washers includes 6 ea. of: 6, 8, & 10 mm sizes.  
Safety Wire Starter Kit ..... P/N 12-16625 .....

Package of 18 Spare Washers..... P/N 12-16626 .....

## AERO SAF-T-BLOKS

 Since the introduction of Saf-T-Bloks in 1981, they've helped thousands of mechanics by taking the headaches and hassle out of drilling safety wire holes in bolts and nuts. This easy to use Saf-T-Blok holds the bolt steady after you thread it in to the required depth. You then drill the hole through the center with no risk of misalignment. Saf-T-Blok is available in 4 sizes:  
Standard: 1/4-5/16-3/8 USS & SAE ..... P/N 12-15345 .....

Metric: 6x1, 8x10, 8x1.25, 10x1.25, 10x1 ..... P/N 12-15346 .....

Aero: 8-32, 10-32, 1/4x20, 1/4x28, 5/16x24 .... P/N 12-15347 .....

Allen: #8,10,1/4,5/16,3/8 .... P/N 12-15348 .....

## NUT SAF-T-BLOKS

 Designed to enable safety wire holes to be drilled through the head of bolts or through nuts, across the diagonal. Designed to accept up to 3/4" dia. nut. Easy to use. Nut Saf-T-Blok requires that the nut or bolt be placed into the "V" groove, tighten down the holding screw, drill & deburr.  
P/N 12-15349 .....

## DRILL RITE PRECISION DRILL GUIDE

 Light and portable, this tool provides straight and true holes every time. Your electric hand drill will perform like a professional drill press. The easy, accurate way to drill any curved surface: Simply place the Drill Rite VGuide™ on any type of pipe or round stock, from 1/2" to 2 1/2" in diameter. Swing the gate closed and lock it down. Insert the proper drill bit in the guide bushing and drill a precisely accurate hole. Includes super hardened drill bushings for popular 3/16" and 1/4" holes for rivets and aircraft hardware. Precision made in the U.S.A. from high quality aircraft grade aluminum.  
P/N 12-00836 .....

## SAFETY WIRE KITS

 These kits include professional safety wiring kit for all applications. Contains 9" automatic standard twister, 6" safety wire twister, made of hardened alloy steel-black oxide finish plus (3) 1/4 lb. spools of annealed stainless steel safety wire. (Sizes: 020-032-042). Model 100 also includes 19" chrome adjustable safety wire twister (for cavity and deep access applications).  
Model 200 ..... P/N 12-16650 .....

Model 100 ..... P/N 12-00336 .....

## INSTRUMENT MOUNTING HOLE DRILL JIG

 Aircraft instrument mounting hole drill jig for standard 2-1/4" & 3-1/8" diameter instruments. Accurate and simple tool to use, drill jig made of hardened steel for long life.  
P/N 12-00975 .....

TO

# KLEIN TOOLS

## STRIPPER/CUTTERS

Klein wire strippers and cutters cut, strip, gauge and loop a wide range of wire types and sizes. Made of strong, hardened steel with comfortable handles, these tools are durable and long lasting.



### 11055 KLEIN-KURVE™ WIRE STRIPPER/CUTTER

Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 10-18 AWG solid wire and 12-20 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action. P/N 12-00235.....



### 11057 KLEIN-KURVE™ WIRE STRIPPER/CUTTER

Solid and Stranded. Double-dipped comfort grips with curved handles, cuts, strips, loops and gauges 20-30 AWG solid wire and 22-32 AWG stranded wire, cleanly shears 6-32 & 8-32 screws, coil spring provides fast, self-opening action. P/N 12-00236.....



### 11045 KLEIN 10-18 WIRE STRIPPER/CUTTER

Strips 10 to 18 AWG solid wire, easy-to-read wire gauge markings, comfortable handles with cushion ridges. P/N 12-00233.....



### 11046 KLEIN 16-26 WIRE STRIPPER/CUTTER

Strips 16 to 26 AWG stranded wire, easy-to-read wire gauge markings, comfortable handles w/cushion ridges. P/N 12-00234.....

## KLEIN WIRE STRIPPERS 6-12



This lightweight Klein-Kurve wire stripper-cutter strips large gauge 6-12 AWG stranded wire and eliminates the need for a skinning knife. The tool clearly shears 6-32 and 8-32 screws and has a serrated pliers nose, which allows the user to pull, grip, and twist wire design and double-dipped textured grips provide control and comfort. P/N 12-01456.....

## 63020 KLEIN-KURVE MULTI CABLE CUTTER



Designed with 3 different cutting blades; anvil cutter, a copper curved cutter & a steel cutter. Cleanly shears 6-32 & 8-32 screws, double-dipped comfort grips with curved handles, coil spring provides fast self-opening action. P/N 12-00496.....



## KLEIN TOOLS CABLE STRIPPER / CUTTER

Klein Tools added its new QTR-Turn NM cable stripper/cutter with Klein-Kurve handles to its existing line of strippers and cutters. The QTR-Turn technology allows users to place cable in the upper jacket strippers, squeeze the handle, and turn one-quarter to completely sever the outer jacket. It utilizes spring-loaded action for self-opening. P/N 12-01770.....

## 63030 KLEIN 8-1/4" CABLE CUTTER



Cuts up to 1" diameter aluminum and copper coaxial cable, curved jaws firmly grasp cable, shear-type cutting blades, precision, one-hand shearing action. P/N 12-00497.....

## CRIMPING/CUTTING TOOL



This tool is designed to crimp insulated and non-insulated 10 to 20 AWG solderless terminals & connectors. It has easy-to-read tool markings to identify the insulated or noninsulated crimping dies. Its tapered nose design works well in tight places and has specially hardened cutter in the nose for quick, clean cuts. Size: 9.75". Lifetime warranty. P/N 12-00698.....

## PLIERS

Designed and built with exceptional quality standards in a tradition that dates back to 1857. Klein specializes in the making of the world's finest pliers, for the professional. What makes Klein pliers different is induction hardening of cutting edges, pliers head hardness, hot riveting and special handle hardness.



**D228-8 KLEIN 8" DIAGONAL-CUTTING PLIERS** - High-leverage, standard-bevel cutting knives, with hand-form style plastic-dipped handles. P/N 12-00228.....



**D203-6 KLEIN 65/8" LONG-NOSE SIDE-CUTTING PLIERS** - Standard cutting knives at hinge, wraps, loops, and cuts, plastic-dipped handles. P/N 12-00229.....



**D203-6 KLEIN 85/16" HEAVY-DUTY LONG-NOSE SIDE-CUTTING PLIERS** - Induction hardened cutting knives, greater cutting power, hot-riveted joint, plastic-dipped handles. P/N 12-00230.....



**D252-6 KLEIN 6" DIAGONAL-CUTTING PLIERS** - All-purpose, heavy duty, tapered nose, induction hardened cutting knives, hot riveted joints, plastic-dipped handles. P/N 12-00231.....



**D202-5 KLEIN 85/16" DIAGONAL-CUTTING PLIERS** - With tapered nose, standard bevel cutting knives, plastic-dipped handles. P/N 12-00232.....



## 5139 KLEIN CANVAS ZIPPER BAG

White canvas bag with strong zipper, convenient storage for tools, 7.5" x 12" overall size. P/N 12-00239.....



## NUT DRIVERS

The professional requires a number of nut drivers in a variety of sizes and types. Klein drivers feature convenience, comfort and efficiency in use, plus exceptional strength and durability. All Klein nut drivers are made of the highest quality tempered steel, carefully heat-treated for maximum strength.

**631 KLEIN 7-PC. CUSHION-GRIP NUT DRIVER SET** - Contains 3/16", 1/4", 5/16", 11/32", 3/8", 7/16", & 1/2" hollow-shaft nut drivers, roll-up plastic storage pouch. P/N 12-00238.....

storage pouch.



**610 STUBBY NUT DRIVERS** - The #610-1/4 & #610-5/16 stubby nut drivers are designed for use in tight spaces and on hard-to-reach fasteners. The tools have cushion grip handles for greater torque and user comfort. Drivers are made for 1/4" & 5/16" hex nut and hex screw sizes. The tool shafts measure 1.5" long and overall 3.5" long. #610-1/4.....P/N 12-00694..... #610-5/16.....P/N 12-00695.....

## KLEIN TIP NUT DRIVER SET 7-PC SET



Full Hollow Shaft design with Rare Earth magnetic tip. (Only with P/N 12-01594). Full hollow shafts facilitate work on long bolt applications. Cushion Grip handles allow for greater torque and comfort. Handle domes are color coded for easy identification. Internal flanges provide solid, twist-resistant shaft anchor. Chrome plated shaft helps prevent corrosion. Set contains Cat. No. 646-3/16M, 646-1/4M, 646-5/16M, 646-11/32M, 646-3/8M, 646-7/16M, 646-1/2M.

Klein nut driver 7pc. set.....P/N 12-00306..... Klein driver 7pc Magnetic Set.....P/N 12-01594.....

TO

# TOOLS

## KLEIN HOLE SAW KITS



Klein Hole Saws feature bimetal cobalt construction which allows for heavy-duty cutting; they can cut through studs in one pass. They also have multiple knock-out slots and holes for easy core removal. Carbide grit hole saws work well for cutting abrasive materials and offer a smooth cut with minimal tear-out.

Electrician's Hole Saw Kit -

Contains the most popular sizes for basic electrical work. Hole Saws: 7/8", 1-1/8", 1-3/8", 1-3/4", 2", 2-1/2" Arbors: 7/16" (qty.2) P/N 12-00969.....

**JOURNEYMAN'S HOLE SAW KIT** - The most frequently used sizes and an arbor extension for hard to reach spots. Hole Saws: 3/4", 7/8", 1-1/8", 1-3/8", 1-1/2", 1-3/4", 2", 2-1/4", 2-1/2" Arbors: 1/4", 7/16" (qty.2), arbor extension P/N 12-00970.....

**MASTER ELECTRICIAN'S HOLE SAW KIT** - Includes the most commonly used saws and arbors. Hole Saws: 7/8", 1-1/8", 1-3/8", 1-3/4", 2", 2-1/2", 3", 3-5/8", 4-1/8", 4-1/2" Arbors: 1/4", 7/16" (qty.2) P/N 12-00971.....

**LARGE SIZE HOLE SAW KIT** - Contains necessary sizes to upgrade a basic hole saw kit into a master set. Hole Saws: 3", 3-5/8", 4-1/8", 4-1/2" Arbors: 7/16" P/N 12-00972.....

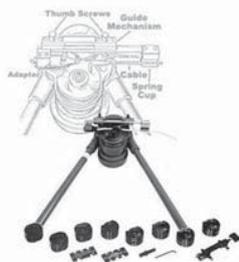
## KLEIN ELECTRICIAN TOOL SETS



Designed for beginner and experienced wiremen, these tool sets range in size from a basic 14-piece assortment to the 41-piece comprehensive collection. Each set contains Klein premium products, such as wire stripper/cutters, screwdrivers, and pliers, plus protective eye wear and a pouch or tool bag for toting and storage. Each set offers a cost savings when compared to buying the tools separately. Tools in Electricians sets have standard handles.

Tools in Journeyman sets have state of the art dual-material handles which provide a superior grip without sacrificing tool strength or durability.

14-Piece Electrician Tool Set.....P/N 12-00819.....  
18-Piece Journeyman Tool Set.....P/N 12-00821.....  
28-Piece Electrician Tool Set.....P/N 12-00820.....  
41-Piece Journeyman Tool Set.....P/N 12-00822.....



## KEARNEY SWAGER

This portable, hand-operated roll type swaging machine will swage MS type terminals onto galvanized and stainless steel cables from 1/16" diameter up to and including 3/16" diameter. Includes machine, a full set of roll dies, terminal gauges and feed guide adapters & instructions in a steel carrying case. Wt. 95 lbs. New manufacture. All replacement parts available. Special order P/N 12-01188.....

## FLYING WIRE TENSIONER



This tool is used for setting the tension on flying wires from 1/4" - 1/2". Tension ranges from 200 lbs. to 2400 lbs. Can also be used for setting drag, anti-drag wire tension. Ideal for use on Stearmans, Wacos, and Pitts, etc. To use this tool you will need a torque wrench. P/N 12-12500.....

## SOFT JAW PLIERS



This new tool is suitable for loosening and tightening threaded locking collars of electrical connectors without marring the gripping surfaces of the collars. Excellent for use on AN and MS connectors, plated pipe and fittings, plastics, glass and ceramics. The soft jaws will not crack or chip plating. Ideal for rod, tube or sheet. Grip Range: 3/4" to 2-1/2" dia. Made from heat-treated steel with black oxide finish. Meets government. Specs. American Made. P/N 12-16800.....

## GREASE JOINT REJUVENATOR - PROFESSIONAL MODEL



Have you ever tried to push grease in through a grease fitting and couldn't? The Grease Joint Rejuvenator opens clogged grease joints and fittings effortlessly in less than a minute!

- Opens clogged grease fittings & joints
- Cleans and replenishes old and dirty grease fittings
- Loosens dried grease in joints
- Cleans ways and stays in milling machines and lathes
- Lubricates bearings on farm, lawn & construction equipment.

How it works: Remove the piston end and fill the tool with penetrating oil. Then place the end over the grease fitting and tap on the piston head with

a hammer until it starts to move down into the tool body. The hydraulic pressure created by tapping on the piston forces the penetrating oil into the grease joint where the blockage is and loosens the old hardened grease (or dirt), flushing the blockage and clearing the way for new grease

Grease Joint Rejuvenator (Pro Model).....P/N 12-01038.....

## COMPRESSION WHISTLE ALERT



No more burning your fingers and hands! Just Listen! Insert Whistle Alert™ into any 14mm spark plug hole and bump the engine until you hear the whistle. You are now on the compression stroke!

- Easily find Top Dead Center compression stroke
  - Turn engine over from inside the car and listen for the whistle.
  - Made of steel and aluminum
  - Made and assembled in the USA.
- Whistle Alert (Rigid).....P/N 12-01039.....  
Whistle Alert (Flex).....P/N 12-01041.....

## ENGINE CALIBRATION & SET-UP KIT



The Engine Calibration & Set-up Kit gives you innovative tools that help eliminate mistakes when setting up mechanical engine timing sequences, timing chains, timing belts, balance shafts and belts, distributor installations and general engine set-up.

- Kit includes: •Standard 6" (14mm) and Extended 10.75" (14mm) •TDC Indicators  
•Compression Gauge Extension  
•Compression Whistle Alert™  
•Crank Stopper  
•18mm & 12mm Spark Plug Hole Adapters, extra nipple for compression tube to whistle conversion.

Engine Calibration & Set-Up Kit..... P/N 12-01040.....

TO

# STEELMAX POWER TOOLS - 3M™ SANDERS

## STEELMAX METAL CUTTING SAW 9 INCH



More efficient than any portable metal cutting process you are using now! • Increase Productivity - No Milling or de-burring with near surgical dry-cut technology. • Cuts a Variety of Metals, Plastic and Wood - Bring your saw to the work-piece while cutting mild steel, stainless steel and aluminum as easy as it cuts plywood. • Cool-to-the-Touch - No waiting for your work-piece to cool down. Just cut it and handle it. • Precise Cutting - With integrated laser sighting system. P/N 12-01716

Accessories	Teeth	Arbor	Part No.	Price
9" Mild Steel Blade	48T	1.0"	12-01803	.
9.25" Mild Steel Blade	48T	1.0"	12-01804	.
9" Stainless Steel Blade	80T	1.0"	12-01805	.
9" Thin Steel Blade	80T	1.0"	12-01806	.
9" Alluminum Blade	80T	1.0"	12-01807	.

## STEELMAX DRYCUT SAW S14



Utilizing a 14" carbide tipped blade, the Steelmax S14 cuts through metal faster, safer and cleaner than abrasive chop saws in a fraction of the time and cost. Powered with a 15 amp motor and geared to turn slower than a chop saw, the S14 dry cutter cuts like a cold saw, but at a fraction of the cost. Sold standard with a 14" carbide tipped mild steel blade attached, heavy duty, industrial strength cast iron base and two position locking vise, this saw is ready for immediate action! Cuts solid mild steel up to 1" thickness; cut profiles: pipe, angles, channel with a depth of cut up to 4-3/4". Bevels to 45 degrees. Saves time and money giving cool cuts that need little to no finishing, eliminating any need for grinding or cool down time. P/N 12-01717

Accessories	Teeth	Arbor	Part No.	Price
14" Mild Steel (Less Than 1")	66T	1.0"	12-01808	.
14" Stainless Steel (Less Than 1/4")	90T	1.0"	12-01809	.
14" Thin Mild Steel (Less Than 1/4")	90T	1.0"	12-01810	.

## MAGNETIC BASE DRILL



SteelMax® brand drills maintain rigidity and accuracy throughout the life of the drill. The rail system eliminates the need to adjust or maintain traditional gibs. In addition to saving on maintenance, cutter life is increased by reducing movement at the cutter tips. When cutters last longer, you save money every day you use SteelMax!

Magnetic Base Drill.....P/N 12-01718  
 Portable Magnetic Drill.....P/N 12-01811

### CUTTERS FOR MAGNETIC BASE DRILL

Dia.	D.O.C.	Part No.	Price	Dia.	D.O.C.	Part No.	Price
7/16"	1"	12-01813	.	1/2"	2"	12-01834	.
1/2"	1"	12-01814	.	9/16"	2"	12-01835	.
9/16"	1"	12-01815	.	5/8"	2"	12-01836	.
5/8"	1"	12-01816	.	11/16"	2"	12-01837	.
11/16"	1"	12-01817	.	3/4"	2"	12-01838	.
3/4"	1"	12-01818	.	13/16"	2"	12-01839	.
13/16"	1"	12-01819	.	7/8"	2"	12-01840	.
7/9"	1"	12-01829	.	15/16"	2"	12-01841	.
1"	1"	12-01831	.	1"	2"	12-01842	.
1-1/16"	1"	12-01832	.	1-1/16"	2"	12-01843	.
7/16"	1"	12-01833	.				

Accessories for Base Drill	Part No.	Price
1" Center Pin For SM4374	12-01845	.
1" Center For 1" DOC Cutters	12-01844	.
2" Center Pin For SM437L Only	12-01847	.
2" Center For 2" DOC Cutters	12-01846	.
True Blue Concentrate Cting Fluid - Quart	12-01852	.

## 1/2 INCH CHUCK & ADAPTER



With this optional industrial arbors and 2MT-1/2" Drill Chuck now you can! SteelMax industrial arbors let you easily adapt our premium m2AL cutters to a variety of machinery, including CNC, lathe's, stationary drill presses and similar equipment. With our integrated coolant collar, cutter performance and cutter life is assured! P/N 12-01812

## 6 AND 13 PIECE CUTTER SETS

Description	Includes	Part No.	Price
6 Piece Set 1" DOC	9/16", 11/16", 13/16", 15/16", 1-1/16", Cutter Case, and 1" Pilot 9/16"-1-1/16"	12-01848	.
6 Piece Set 2" DOC	9/16", 11/16", 13/16", 15/16", 1-1/16", Cutter Case, and 2" Pilot 9/16"-1-1/16"	12-01849	.
13 Piece Set 1" DOC	7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", Cutter Case, and 1" Pilot 7/16", 1" Pilot 9/16"-1-1/16"	12-01850	.
13 Piece Set 2" DOC	7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", Cutter Case, and 1" Pilot 7/16"-1/2", 1" Pilot 9/16"-1-1/16"	12-01851	.

## 3M™ ORBITAL SANDERS



The all new line of 3M™ air-powered finishing tools includes innovations designed to optimize performance and productivity. 3M™ Tools are designed for smooth operation, and are packed with horsepower. Multiple grip sizes are designed to provide advanced operator comfort, and color-coded levers allow for easy orbit identification.

### RANDOM ORBITAL SANDERS



The 3M's NEW dust management system featuring Clean Sanding Abrasives and Accessories is revolutionizing the dust evacuation process. Discs are designed to cut more and last longer. The patented multi-hole pattern captures and remove more dust compared to 5- or 6-hole products.

Model	Tool Dia. Inch (mm)	Vacuum	Orbit Dia Inch	Max RPM	Motor HP (W)	Airflow Rate SCFM (LPM)	PN	Price
20316	3"(77)	Yes	3/32"	12,000	28(209)	17(481)	05-03482	.
20319	5"(127)	Yes	3/16"	12,000	28(209)	17(481)	05-03483	.
20314	3"(77)	No	3/32"	12,000	28(209)	17(481)	05-03485	.
20317	5"(127)	No	3/16"	12,000	28(209)	17(481)	05-03484	.

Accessories	PN	Price
 Clean Sanding Filter Bag	05-03486	.



**3M™ CLEAN SANDING 236U DISCS**  
 An aluminum oxide Hookit™ disc with precise hole design for improved dust extraction constructed on a C weight, intermediate paper backing. CW Array Hole Pattern.

Model	Part No.	Price	Model	Part No.	Price
6"P120	05-03576	.	3" P80	05-03585	.
5"P500	05-03577	.	3"P500	05-03586	.
5"P400	05-03578	.	3"P400	05-03587	.
5"P320	05-03579	.	3"P320	05-03588	.
5"P240	05-03580	.	3"P240	05-03589	.
5"P220	05-03581	.	3"P220	05-03590	.
5"P180	05-03582	.	3"P180	05-03591	.
5"P150	05-03583	.	3"P150	05-03592	.
5"P120	05-03584	.	3"P100	05-03594	.



## AVIATION MECHANICS GLOVES

Researched, developed and designed by aviation engineers, this mechanics glove is your best choice for comfort, dexterity, and wear. Excellent for aircraft mechanics or for using during preflight inspections. These gloves are not flame proof or fire retardant; do not wear while draining or exposure to open flame. Available in black and blue. Wt: 6oz.

### Main Features:

- Cuff made of neoprene, provides extra support, flexibility, impact protection and comfortable fit
- Two-way breathable stretch spandex, provides an extremely comfortable and snug fit.
- Knuckle panel protection made of neoprene for impact protection, comfort and to guard against scrapes and abrasions.
- Precision cutting and quality of fingertip seams ensure enhanced fingertip sensitivity.

Color	Size	Part No.	Price	Color	Size	Part No.	Price
Blue	Med.	13-04741	.	Black	Large	13-04744	.
Black	Med.	13-04742	.	Blue	XL	13-04745	.
Blue	Large	13-04743	.				

TO

# CABLE CUTTERS - SWAGERS

## FELCO CABLE CUTTERS

A cable when crushed or deformed is difficult to use with fittings. These fine quality Swiss made cutters, with unique triangular jaws, never leave a frayed end.



**#C-7F CUTTER** - Capacity 3/16" diameter and smaller. Length 8". Wt. 10 oz.  
P/N 12-01135 .....



**#C-9 CUTTER** - Cuts 1/4" steel cable  
P/N 12-00179 .....



**#C-12 CUTTER** - Capacity 3/8" diameter and smaller. Length 19". Wt. 3 lbs.  
P/N 12-01174 .....

**#C2A CUTTER** - Snub nose for loose cuts. 10% harder blade than C7 for long life and cutting of very hard wire or cable. Opening of tool cuts up to 2mm wire & stranded cable. P/N 12-00223 .....



## S & F CABLE CUTTERS

A fine tool made from high quality alloy steel and heat treated for best cutting action and long life of cutting edges. Handles shaped for comfortable grip and minimum cutting effort. Max. capacity 3/16" dia. 1 x 19 cable.  
No. 316 Cable Cutter.....P/N 12-18600 .....

## BENCH MOUNT FOR #316 CABLE CUTTER

This bench mount adds to the versatility of the #316 cable cutter. Mounts with 2 screws to a bench or plate. Fingers can still grip the tool. Easily removed.  
P/N 12-00674 .....



## S & F HARD WIRE CUTTER

These quality cutters feature a unique handle design with thick "T" shaped vinyl handle grips for maximum comfort while cutting. Cuts 3/32" maximum diameter music wire, heat treated steel spring wire, stainless or galvanized cable. Produces clean square cuts. Gold iridite finish for maximum rust protection. Length: 6". Wt. 7 oz.  
Model No. 093.....P/N 12-18605 .....



## CABLE TENSION METER

This precision instrument gives accurate readings over a wide range of cable tensions. No preliminary adjustments are necessary. May be used continuously without resetting or checking. Extreme heat or bitter cold does not affect the accuracy of the readings. One instrument is usable on many cable sizes with absolute accuracy. The small size permits entry through small openings and permits accurate readings on cable located in confined areas. The entire operation of testing cable tensions can be done with one hand in a matter of seconds. Range in lbs.: 10-100 on 1/16", 3/32", 1/8"; 15-150 on 5/32", 3/16"; 25-150 on 7/32", 1/4" ..... T5-2002-101-00 .....



## BURROUGHS CABLE GAUGE

Easy to use - just squeeze ball handle, put gauge on cable, release handle and read tension on rotation dial. No conversion charts necessary. Tension range: 10-70lbs. for 1/16" cable, 15 - 70 lbs. for 3/32 & 1/8" cable. 50-350 lbs. on 5/32" & 3/16" cable. Only 3-1/4" wide. Fits through inspection hole. For 1/16", 3/32", 1/8" .....P/N 12-19200 .....

## TENSITRON CABLE TENSION METERS



Standard Features of all models: • Easy one-hand operation • No interchangeable parts are needed to adapt to different cable sizes • Memory Lock Pointer holds readings until cleared • Calibration chart affixed to back of meter • Durable and made of non-corrosive materials • Weigh approximately 21 oz. Compact design allows engagement of meter onto cables closely routed along floors, flat surfaces and other minimum clearance areas. Models ACM-100, ACM-200, ACM-300, ACM-400 are compact enough to allow use in limited access panels as small as 4" dia.

Model	Part No.	Price
<b>ACM-100</b> - Designed to measure from 5-100 lbs tension in 1/16", 3/32", 1/8", 5/32" diameter cables.	12-01050	.
<b>ACM-200</b> - Designed to measure 20-200 lbs tension in 1/16", 3/32", 1/8", 5/32", 3/16", and 1/4" diameter aircraft cables.	12-01051	.
<b>ACM-300</b> - Designed to measure from 40-300 lbs tension in 3/32", 1/8", 3/16" and 1/4" diameter standard cables.	12-01052	.
<b>ACM-400</b> - Designed to measure from 40-400 lbs tension in 3/32", 1/8", 5/32" and 3/16" diameter standard cables.	12-01053	.
<b>ACM-600</b> - Measures tension from 40-600 lbs in 1/8", 5/32", 3/16" and 1/4" diameter aircraft cables.	12-01362	.

## ECONOMY SWAGING TOOLS

**NO. 2 SWAGE-IT** - For use with sleeves for 1/16", 3/32" and 1/8" cable. Swaging pressure applied by using a wrench to tighten bolts. Size: 1/2" x 1" x 7". Wt. 1 lb. Cadmium plated. P/N 12-12000 .....



**NO. 3 SWAGE-IT** - For use with sleeves for 1/8", 5/32", 3/16" and 1/4" cable. Same design as No. 2 tool but larger. Size: 3/4" x 1-1/2" x 14". Wt. 3-1/2 lb.  
P/N 12-12100 .....

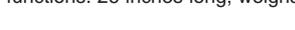


## SWAGE-IT RIGGING KIT

This Swage-It rigging kit contains everything you will need for rigging and emergency repairs of Nicopress sleeves on cables. Includes the #2 Swage-It tool for 1/16", 3/32" and 1/8" sleeves, 1/2" extension wrench for use on the #2 tool and a #316 cable cutter. Size: 4-1/2" x 9". Packaged in a clear plastic tube with vinyl caps to better protect tools.  
P/N 12-12200 .....

## LOCOLOC NO. 1-SC SWAGER

No. 1-SC Hand Swager - Multi-compression hand swager with cable cutter. Swages 1/16", 3/32", 1/8", 5/32", and 3/16" oval and stop sleeves, plus 7/32 stop sleeves, for a total of 11 sizes plus the ability to cut up to 7/32" diameter aircraft quality steel cable. A tool with a dozen functions. 26 inches long, weighs 6.5 pounds.  
P/N 12-12400 .....



## LOCOLOC HANDSWAGING TOOL

LocoLoc #1-3-SBHS Hand Swager - This tool is an outstanding small hand tool, and it does a great job of swaging small sleeves. This is a (4) cavity tool, swaging sleeve sizes 1/32", 3/64", 1/16", 3/32" and #12 SEISMIC.



Ratchet mechanism will not release until swage is complete. Swages copper and aluminum sleeves only. Usage instructions and swage gauge included in each tool. Each LOCOLOC Swager is supplied with a gauge. Application: Copper Oval Sleeves, Copper Oval Plated Sleeves and Aluminum Oval Sleeves  
P/N 12-00222 .....

## GO-NO GO SLEEVE GAUGE

When the proper slot in the gauge slips over the compressed area of the sleeve after swaging then your swage is satisfactory. If the proper slot does not fit over the compressed area of the sleeve after swaging then your tool is out of adjustment and your cable assembly will not hold the rated breaking strength of the cable which should be the result when oval sleeves are used to form a loop or eye in a cable assembly. GA-1P: Gauges all swages performed on 1/32", 3/64", 1/16", 3/32", 1/8", 5/32", and 3/16" oval and stop sleeves.  
P/N GA-1P .....



## TENSITRON ACX-SERIES DIGITAL AIRCRAFT CABLE TENSION METER

\* Indicate Cable Tensions in Lbs, KG, or Newtons.  
\* Small space access. One-hand operation. Memory storage features.  
ACX Screen Callouts :Display shows tension, battery charge level, name of calibration selected, and stores and displays up to 5 separate tension readings and their average. \* Large, easy to read backlit, graphic display with adjustable backlighting and contrast. \* Select cable size from menu. Instrument automatically adjusts calibration to correct setting. \* Accuracy is +/- 2% full-scale for all menu-selectable calibrations. Accuracy for custom calibrations is material specific. \* Up to 10 calibrations can be entered into instrument. (All calibrations password protected to provide due diligence). \* Adjustable LCD refresh rates allow for stable digital readings. \* All models factory-calibrated and ready for use on aircraft. \* Calibration values traceable to National Standards. Calibration certificate included.  
Input Real-Time Serial Data into any Windows® application using any number of software wedge programs, such as WinWedge Pro® for Windows, or configure your Windows® operating system to capture the data via HyperTerminal®.



Model	Range	Res.	Cable Selections	Part No.	Price
ACX-100	5-100 lbs	0.5 lb	1/16", 3/32", 1/8", 5/32"	12-02103	.
ACX-250	20-250 lbs	0.5 lb	1/16", 3/32", 1/8", 5/32"	12-01549	.
ACX-500	40-500 lbs	1 lb	3/32", 1/8", 5/32"	12-01052	.
ACX-CWT	20-250 lbs	0.5 lb	CWT-5,CWT-10, CWT-15,CWT-20,CWT-25	12-02104	.
ACX-CMB	20-250 lbs	0.5 lb	1/16",3/32", 1/8",5/32", CWT-5 thru CWT-25	12-02105	.

TO

# SPECIALTY TOOLS - DEBURRING TOOLS



## THE GRIPPER - ALL DIGITAL CABLE TENSIOMETER

There are no extra parts to worry about. The Gripper can adapt to 5 Cable sizes 1/16, 3/32, 1/8, 5/32, and 3/16. From 5 to 150lb's. 1%-2% Accuracy. An instrument that will pay for it self quickly. The time savings compared to your current tool will amaze you. Electronically measured readings, assures accurate, reliable and repeatable measurements every time you use the "Gripper". The Gripper heads small size (1 1/8" square by 4 1/8" long ) lets you access tight areas as it will go where other just will not go. It comes to you calibrated and ready for use. **Features:** • Unique Remote Head Fits in to tight areas • Backlit Controller for easy reading. **Specifications;** • Cable sizes: 1/16, 3/32, 1/8, 5/32, and 3/16. • From 5 to 150lb's • 1%-2% Accuracy  
P/N 12-01722.....



## DEBURRING TOOL

Utilizes a twist-of-the-wrist action for deburring holes and radii. Curved blade automatically follows all contours. Telescoping blade holder extends to reach deep internal holes. Supplied with one #10 and one #20 deburring blade. P/N 12-00700.....

Item	Description and Application	P/N	Price
#10 Deburring Blade	High-speed steel. For steel, aluminum & smaller holes	12-00800	.
#20 Deburring Blade	High-speed steel. For brass, Bronze, cast iron, larger holes.	12-00900	.
#40 Scraper Blade	High-speed steel. Small triangular blade.	12-01000	.
#42 Scraper Blade	High-speed steel. Large triangular blade.	12-01100	.
#48 Scraper Blade Holder	Holder has 10-32 threads. Accepts #40 & #42 blades. Extends to 3-1/2".	12-01200	.
#50 Scriber	Carbide-tipped scriber.	12-01300	.
#60 Deburring Blade	For backside deburring & for restricted positions	12-01400	.
#70 Deburring Blade	Carbide-tipped blade for deburring edges of sheet metal.	12-01500	.



## SPEEDY BURR

Speedy Burr is designed to take the fatigue out of deburring. The wrist support makes the job easier. This tool is great for deburring spars and extrusions. The light weight, aluminum, hand-grip formed frame is comfortable and helps to maintain continuity in angle and depth of deburr. The wrist support is rubber lined to prevent skin abrasion. P/N 12-00650.....



## SPEEDY BURR II

Speedy Burr II is designed for deburring outside corners, sheet metal, machined parts, extrusions, castings, and plastic parts. This lightweight easy grip tool has a durable plastic coating on the handle for comfort and a sure grip. The burring tip is made from hardened steel and is replaceable. Speedy Burr II..... P/N 12-00651.....  
Replacement Burr Tip..... P/N 12-00652.....



## COMPASS FILLING AID

The compass filling aid is designed to be used for filling most standard aircraft compasses. The standpipe is simply attached to the compass with a supplied special rubber band. The compass is then filled and purged through the standpipe. When all air is removed, and the level in the standpipe is constant, the plug is then installed through the filled standpipe. Thus the need for submerging for proper filling is eliminated. P/N 12-17604.....



## TURNBUCKLE WRENCH CABLE RIGGING

This tool consists of two clamps joined by a 12" length of sprocket type (bicycle) chain. It will accommodate all sizes of aircraft cable. When clamped to cable and fittings at each side of the turnbuckle, anchor the cable to allow free adjustment of the turnbuckle. The adjustment becomes a two hand instead of three hand adjustment. P/N 12-00833.....

## CESSNA COWLING FASTENER DRIVER



Slotted type cowling fasteners are not easy to fit with generic common screwdrivers. To overcome this, driver has a broad hollow cut tip that accurately engages the drive slot. Additionally, a no mar, spring loaded, plastic sleeve simultaneously guides the tip by fitting around the outside diameter of the fastener head. P/N 12-17615.....

## CESSNA SEAT RAIL GAGE



Allows for quick limit checking of seat rail hole and wear dimensions. Gage elements are made from heat treated blue tempered steel. Each element is marked to correspond to the limits set forth in the relevant ad. The three gage elements are linked together on a universal spiral key ring. P/N 12-01056.....



## PORTABLE STRUT / TIRE PUMP

This pump is constructed of aluminum and nylon. It's overall dimensions are 29.5" (750 mm) long, with a body of approximately 1" diameter and a "T" handle and base 8" (200 mm) long. It weighs 1.65 lb (.75 kg), has a nylon hose with 2000 P.S.I. burst pressure and a strut valve fitting on the end that doesn't depress the valve so that no pressure can escape from the strut. The pump is capable of pumping up to 650 P.S.I. without any compressed air required for the inlet, which is more than adequate for most light aircraft, e.g.: Piper Cherokee PA28-235 needs 450 P.S.I. for the main struts with the weight of the Aircraft on the strut. The pump can also be used as a tire pump as a backup. The main use for the strut pump is for the individual aircraft owner that operates from remote areas and don't have access to a compressor, however they are popular with maintenance organizations as well. The pump is small and light enough to fit in the luggage compartment and have with you all the time ready for that moment when your Oleo goes flat. P/N 12-16714.....

enough to fit in the luggage compartment and have with you all the time ready for that moment when your Oleo goes flat.



## HX STRUT PUMP

**Boost air to 1000psi without an air compressor.**

- Very portable. No air compressor needed!
- Use air bottle, spare tire, tire pump for source air.
- Can also use with air compressor for air source.
- Detailed instructions.
- Equipped with 7 foot hose

P/N 12-16710.....



## 15X STRUT PUMP

**Boost air or nitrogen to 2250psi.**

- More than enough pump for most aircraft.
- Built for shop use or for a discriminating do-it-yourselfer.
- Weighs less than 7 pounds.
- Equipped with a 36" hose.
- Comparable to pumps priced in the thousands.
- Nitrogen adapter makes it easy to use bottled nitrogen.

15X Strut Pump..... P/N 12-16700.....  
Nitrogen Adapter Kit..... P/N 12-02016.....



TO

# WORK LIGHTS - INSPECTION MIRRORS

## CONDUCT-A LITE INSPECTION KIT



Kit consists of aluminum 2-cell holder, 1-cell holder for use in small areas, 6" straight Lucite conductor, 4" curved Lucite conductor for lighting around corners, 2-1/2" straight conductor for pin-point lighting, and clip on mirror which attaches to any of the Lucite conductors. When used with curved conductor it can virtually make light available around a corner in a full 360° arc. Operates on penlight batteries (not included). P/N 12-14900

## FLUORESCENT WORK LITE



Lights a greater area than a 150 W bulb for 1/10 the electricity. Throws a glare-free light. Hold it or hang it. Cool, insulated, shatter-resistant. Does not get hot - safe to handle. For 110V AC. Furnished with 25-ft. yellow oil-resistant cord. P/N 12-00909

## FLEXIBLE MICROLIGHTS



This Super-Bright Micro 360 Flexible LED Light is 10 times brighter than standard flashlights and lasts up to 100 hours on a single set of batteries! Features: •Stainless Steel • Lifetime Warranty • Focused lens power beam • Shock proof, water resistant and cold burning • LED-"Light-Emitting Diode" • White beam • 100 hours of light without a battery change • Diode-charge system • Easy on/off-switch • 6" in length • Batteries included. Micro Flex ..... P/N 13-02846 ..... Mega Flex ..... P/N 13-02847 .....

## PILOT'S FLEX-LITE



This ingenious light puts a shadowless light beam wherever you want it. Stainless steel clip, visor, interior panel, shirt pocket, etc. and leaves your hands free. Flexible neck bends into nearly any position and stays there. Anodized aluminum construction with vinyl covered flexible cable. Body of light measures 5.5" with a 6" cable. Uses two AA batteries (not included). This light is the only light available with a precision ground optic lens for even light distribution. Available in a clear or red lensed model.

Clear ..... P/N 12-00383 .....  
Red ..... P/N 12-00521 .....

## HEADLIGHTS



The Brighteyes Pro Headlights is a hands-free flashlight worn like eyeglasses to provide light for reading maps, instruments, repair work, and more. Excellent for work on aircraft, automotive applications, around the house, camping, & fishing. Headlights can be used with or without eyeglasses, and the lights will swivel to direct the light where you need it. (4) AAA batteries included. P/N 12-00242

## BEND-A-LIGHT



Bend-A-Light flexible brass-alloy high intensity light tools bend to any configuration and illuminate hard-to-reach areas where conventional lighting cannot go. The incredibly brilliant light beam penetrates anywhere! Bend-A-Light is a must for electronics, automotive, maintenance, repairs, locksmiths, industrial, hobbies, around the house and more. You bend it...and it holds! Bend-A-Light is the only complete line of professional quality high intensity flexible light tools. Available in 3 lengths and 3 different lamps to choose from. All Bend-A-Light models are made in USA and come with batteries installed.

Part No.	Description	Length Flex Shaft	Length Overall	Batt.	Bulb	Price
12-15005	Mini Pro	6"	11.5"	2-AAA	12100	.
12-15150	Pro	15.75"	24"	3-AA	12110	.
12-10250	Removable Shaft	9.5"	15.75"	2-AA	12100	.

Part No.	Description	Dia	Bulb Life	Price
12-15020	12100 - Replacement Lamp	5/32"	4 Hours	.
12-12110	12110- Krypton Lamp	5/32"	20 hours	.

## HAWKEYE PRECISION FLEXIBLE BORESCOPIES



Hawkeye precision borescopes feature the patented endoGRINS lens system for superior optical quality. The eyepiece can focus on an object from 0.280" (7mm) all the way to infinity at a maximum magnification of 120X. Kit includes the borescope, a high intensity Mag-Light flashlight, a SideWays™ 90° mirror for viewing at right angles, and a cleaning kit.

7" Hawkeye Hardy Kit ..... P/N 12-00337 .....  
12" Hawkeye Hardy Kit ..... P/N 12-00338 .....

**NOTE: ALL BORESCOPES ARE NON-RETURNABLE**

## INSPECTION MIRRORS AND MAGNIFYING MIRRORS FOR ALL-ANGLE VIEWING



Double ball-joints of tempered spring steel move freely, hold desired position for viewing to 360°. Mirrors have brushed stainless steel backs and insulating vinyl grips. Refill mirrors available.

Description	Size	Length	P/N	Price
A-2 Circular Pocket mirror	7/8" Dia.	7.5"	12-01080	.
A-2M Circular Magnifying Pocket mirror	7/8" Dia.	7.5"	12-01081	.
B-2 Oval Pocket mirror	1" x 2"	8.5"	12-01169	.
C-2 Circular Telescoping Mirror	2-1/4" Dia.	10" to 14"	12-01175	.
C-2M Circular Magnifying Telescoping Mirror	2-1/4" Dia.	10" to 14"	12-01176	.
K-2M Rectangular Magnifying Telescoping Mirror	2-1/8" x 3-1/2"	11.25" to 14.25"	12-01152	.

Description	P/N	Price
HTE-2 with 1.25" mirror for viewing in tight areas telescopes from 6.5" to 35"	12-01090	.
HTC-2 with 2.25" mirror for viewing in less restricted areas telescopes from 6-1/2" to 36-3/8"	12-01089	.
HTS-2 with 3.25" mirror for brightest clearest viewing with room to maneuver telescopes from 6.5" to 36-3/8"	12-01091	.
HTC-2LT with 2.25 LED case illuminates darkened areas - two lithium batteries included. All-angle ball joint holds lighted mirror head firmly for perfect viewing textured cushion grip will not slip in wet or oil hands. Stainless steel handle telescopes from 6-3/4" to 37"	12-01979	.

## THE INSPECTOR ADJUSTABLE LIGHTED INSPECTION MIRROR



No more trying to aim a flashlight at the old style mirror. Inspector is a one-hand tool that comes with a very bright light that illuminates the total inspection area. Easy to adjust the mirror angle. Once inserted into the inspection area, simply push or pull the thumb knob for a 90° mirror angle adjustment. The product is constructed of non-conductive materials for safety. The mirror, lamp, and 2-AA batteries (included) are easily replaceable.  
Inspector ..... P/N 12-15105 .....  
Inspector Replacement Lamp ..... P/N 12-15110 .....  
Inspector Replacement Mirror ..... P/N 12-15115 .....

## BINOCULAR MAGNIFIERS



The Binocular Magnifiers offer powerful, crisp magnification of your detailed projects while simultaneously leaving both of your hands free to work. The ground and polished optical lens is mounted to a tilt-up frame, allowing you to disengage the magnifier without removing the entire assembly from your head. This item is equipped with a cushioned headband which rests as comfortably as a baseball cap and is likewise adjustable for a snug fit. Features: • 1.75x magnifying lens. • Great for assembly and inspection applications. • Used commonly by toolmakers, machinists, engravers, jewelers and hobbyists. • Leaves hands free to work. • Tilt-up lens frame instantly removes magnifying lens from sightline. • Ground and polished optical lens eliminates eyestrain. • Fits over prescription glasses. • Adjustable, cushioned headband for comfort fit. 14" focal length.

Description	Power	Focal Length	Part No.	Price
Binocular Magnifiers	1.75X	14"	950-3	.
Binocular Magnifiers	2.25X	10"	950-5	.
Binocular Magnifiers	2.75X	7"	950-7	.

TO

# INSPECTION SCOPES

## VISUAL OPTICS VIDEO STICK



Visual Optics new video based inspection scope, the VS36-10WW, gives you the latest in remote video technology. The Video Stik is for remote inspection of areas generally inaccessible to the naked eye. IT comes with a distal video camera at the end of a 36" shaft for internal inspection of engines, A/C systems, interior structures of walls, and other industrial and simi liar applications. Imaging and illumination is provided by a full color image sensor and dual solid state LEDs which are controlled by an on/off rocker switch. The 2.5" full color LCD screen allows the user to observe live video from the distal camera. The unit is powered by 4-AA batteries. The Video Stik is shipped with a protective case for storage. Accessory Mirror allows user to see 90 degrees to axis of the shaft. The Magnet accessory will pick

up approx 1/4 lb.

### Features:

- High resolution remote color camera
- 2.5" full color viewing monitor
- 10mm shaft diameter
- Waterproof, Flexible shaft
- 36" standard shaft length
- High output LED illumination
- 5 hrs operation on 4-AA batteries (included)
- Mirror and Magnet accessories included
- Video Output for recording
- Poly pro storage case

### Specifications:

- Shaft Length: 36" Water Resistant
- Distal Tip Dia: 0.42" Maximum
- W/ Accessories: 0.46 Maximum
- Viewing Angle: 55 Degrees
- Viewing Distance: 0.4" to Infinity
- Resolution: 320x240 pixels
- Viewing Monitor: Color 2.5" LCD
- Video output: RCA - NTSC signal
- Shaft Radius: 2.5" Minimum
- Power: Alkaline AA batteries (4)
- Battery Life: 4hours
- Storage Temp: -4F to 158F (-20 to +70)
- Operating Temp: 32F to 113F(0 to 45)
- Accessories: Mirror and Magnet
- Warranty: 1 Year

P/N 12-01744 .....

## VT-FLUV & VT-FLED SERIES SCOPES



### Features:

- Highly detailed imaging with 7400 pixels
- Compact Design
- Superior optics provide easier viewing
- Waterproof shaft
- Petroleum & Chemical Resistant
- Viewing range, 40 degree - 1/2 inch to infinity
- Highly affordable

**VT-FLED SERIES** - Visual Optics has engineered and manufactured the next step in the evolution of the fiber optic bore scope. Their creation of the VO FLED Series Fiber Scope has raised the bar in the areas of optical quality, image light output, shaft control and material tolerance. The VO Series Fiber Scope achieves industrial level quality at an affordable price.

Model	Length	Diameter	Includes	Part No.	Price
VT24-4FLED	24"	4mm	Inspection Scope, Battery, White LED Flashlight, Mirror,	12-01739	.
VT24-6FLED	24"	6mm	Magnet & Suitcase Style Carrying Case	12-01740	.

**VT-FLUV SERIES** - All VT Series Scopes (4.3MM or 6MM) can now be purchased with LEAK DETENTION CAPABILITIES. Exchanging the White Light LED flashlight with a UV Flashlight does this. The UV Flashlight will Fluoresce Leak detection dyes. The Kits (referred to as - FLUV) come complete with both flashlights. The VO FLUV Series Fiber Scope has raised the bar in the areas of optical quality, image light output, shaft control and material tolerance.

Model	Length	Diameter	Includes	Part No.	Price
VT24-4FLUV	24"	4.3mm	Inspection Scope, Battery, White LED Flashlight, UV Flashlight,	12-01741	.
VT24-6FLUV	24"	6mm	Mirror, Magnet & Suitcase Style Carrying Case	12-01743	.

## VISUAL OPTICS - 10MM LED SERIES SCOPES



Visual Optics has engineered and manufactured the next step in the evolution of the fiber optic bore scope. Their creation of the VO LED Series Fiber Scope has raised the bar in the areas of optical quality, image light output, shaft control and material tolerance. The VO Series Fiber Scope achieves industrial level quality at an affordable price.

### Features:

- High resolution image bundle
- High flex shaft material
- Strong / stable light source
- Briefcase style instrument case
- Highly detailed imaging with 7400 pixels
- High output LED lighting - 2 White LED's in tip
- No bulbs to change - Ever
- Superior optics provide easier viewing
- Spring Lok Design - Longer reach w/o drooping
- Waterproof shaft
- Industrial grade, 2 level light switch
- Viewing range, 40 degree - 1/2 inch to infinity
- Standard lengths 18, 24, 36 and 48 inch
- Replaceable halogen bulb in the handle
- Highly affordable

Model	Length	Diameter	Description	Part No.	Price
VO18-10W/W	18"	10mm	LED / Lithium Mirror/Magnet Kits Included	12-01735	.
VO24-10W/W	24"	10mm	LED / Lithium Mirror/Magnet Kits Included	12-01736	.
VO36-10W/W	36"	10mm	LED / Lithium Mirror/Magnet Kits Included	12-01737	.
VO48-10W/W	48"	10mm	LED / Lithium Mirror/Magnet Kits Included	12-01738	.



## VISUAL OPTICS HALOGEN SERIES SCOPES

Visual Optics has engineered and manufactured the next step in the evolution of the fiber optic bore scope. Their creation of the VO Halogen Series Fiber Scope has raised the bar in the areas of optical quality, image light output, shaft control and material tolerance. The VO Series Fiber Scope achieves industrial level quality at an affordable price.

### Features:

- High resolution image bundle
- High flex shaft material
- Strong / stable light source
- Briefcase style instrument case
- Highly detailed imaging with 7400 pixels
- Superior optics provide easier viewing
- 4mm, 6mm diameters
- Water and abrasion resistant shaft material
- Industrial grade, 2 level light switch
- Viewing range, 40 degree - 1/2 inch to infinity
- Standard lengths 18, 24, 36 and 48 inch
- Replaceable halogen bulb in the handle
- Highly affordable

Model	Length	Diameter	Description	Part No.	Price
VO18-4H	18"	4mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01729	.
VO24-4H	24"	4mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01730	.
VO36-4H	36"	4mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01731	.
VO18-6H	18"	6mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01732	.
VO24-6H	24"	6mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01733	.
VO36-6H	36"	6mm	Halogen / Lithium Bulb/ Mirror/Magnet Kits Included	12-01734	.

TO

# SPRAY SYSTEMS

## GRACO HVLP SPRAY SYSTEMS

Virtually eliminates mist. Requires less maintenance. Blows less heat up the stack. Uses up to 50% less material. Delivers better pattern control. Reduces overspray up to 90% Eliminates high-pressure "flop" and tiger stripes.



**GTS-2500 HVLP SPRAYER** - This lightweight, portable sprayer features the GTS-960 Bleeder Style Gun and offers outstanding performance in its equipment class. Easily spray stains, lacquers, oils, enamels and urethanes.

- Turbine Stages - 2
- Cup - 1 qt (1 liter)
- Weight: Complete - 32 lb
- Turbine Air Working

Pressure - 5 psi (.345 bar, 34.5 kPa) max.  
 • Turbine Air Outlet Flow Rate - 58 cfm (1642 lpm) max.  
 • Gun - GTS-960 Bleeder Style with Fluid Set #3  
 • Standard Turbine Air Hose Length-Standard units incl. 20 ft (6 m). Use 40 ft (12 m) max.  
 • Electrical Rating - 7A at 120 VAC  
 • Power Cord - No. 16 AWG, 3 wire, 6 ft (1.8 m)  
 • Shipping 18 in. x 15-1/2 in. x 16 in.  
 \* **The GTS-2500 is not designed for use with non-bleeder guns.**  
 P/N 12-15710.....



**GTS-3800 HVLP SPRAYER** - The GTS-3800 is highly productive for nearly all fine finish applications. Easily spray stains, lacquers, oils, enamels, urethanes and automotive finishes. Plus, it atomizes many water-based latex and acrylic coatings, multi-color and other higher viscosity coatings.

- Turbine Stages - 3
- Turbine Air Working Pressure - 6 psi (.414 bar, 41.4 kPa) max.

• Turbine Air Outlet Flow Rate - 80 cfm (2265 lpm) max.  
 • Gun - GTS-980 Non-Bleeder Style with Fluid Set #3  
 • Cup - 1 qt (1 liter)  
 • High-Flex Turbine Air Hose Length - Standard units incl. 30 ft (9 m). Use 60 ft (18 M) max.  
 • Power Cord - No. 16 AWG, 3 wire, 6 ft (1.8 m)  
 • Electrical Rating - 12A at 120 VAC  
 • Weight: Complete - 34 lb  
 • Dimensions: 18 in. x 15-1/2 in. x 16 in.  
 P/N 12-15780.....



**GTS-4900 HVLP SPRAYER** - Our most powerful and versatile sprayer offers everything you need on the job for high productivity. This unit is loaded with features and can spray the broadest range of materials.

- Turbine Stages - 4
- Weight: Complete - 39 lb
- Turbine Air Working Pressure - 8 psi (.552 bar, 55.2 kPa) max.
- Turbine Air Outlet Flow Rate - 82 cfm (2321 lpm) max.

• Gun - GTS-980 Non-Bleeder Style with Fluid Set #3, #4 and #5  
 • Cup - 1 qt (1 liter)  
 • High-Flex Turbine Air Hose w/Quick disconnects - Standard units include 30 ft (9 m). Use 60 ft (18 M) max.  
 • Power Cord - No. 12 AWG, 3 wire, 15 ft (4.6 m)  
 • Electrical Rating - 14A at 120 VAC  
 • Dimensions: 18 in. x 15-1/2 in. x 16 in.  
 P/N 12-15950.....

## GRACO ACCESSORIES

Description	Part No.	Price
HVLP 1 Qt. Cup & Pot Assy.	12-12990	.
2mm Needle/Nozzle (dopes)	12-15750	.
2.8mm Needle/Nozzle	12-15760	.
30 ft. Replacement Hose	12-00016	.
Superflex Hose 54"	12-74660	.

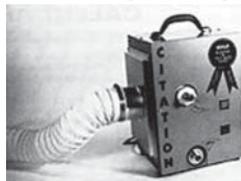
## CITATION 240 PAINT SPRAYER/RESPIRATOR SYSTEM



The Citation HVLP 'twin turbine' system provides both a 'professional quality' paint spray system and the HobbyAir supplied-air respirator in one portable package. This system comes complete with everything you will need to spray exceptionally fine finishes with practically any material and to breathe in safety and comfort while you work. The basic system includes two 40' airlines (one for breathing and one for painting) and a half face mask. Available options include: A larger two-person Citation system with 3 airlines (two for breathing and one for spraying), Full face masks, and air-supplied hoods. This system comes with an unconditional 1-year warranty.

P/N 12-15900 .....  
 Optional 4 ft. whip hose..... P/N 12-15910 .....

## CITATION INTAKE ADAPTER



The Intake Adapter allows the pump unit to be placed inside the shop area, keeping it out of the elements. With the adapter installed, the vent hose can be extended to a fresh air location up to 50 feet away, allowing the pump to draw in fresh air from a distant location. The caution is to place the pump in a location inside the shop that is at least 30 feet away from the actual spray area in which it will not come in contact with flammable material. For example, the pump should never be placed inside a paint booth. Adapter kit comes complete with the steel adapter itself, screws, weatherstrip, hose clamp, 50 feet of 4-inch hose and installation instructions.

P/N 12-15901 .....

## PRIMER PISTOL



Simple and cost effective way to apply small amounts of primer paint and liquid with minimal cleanup time. A valuable tool for aircraft builders. Requires empty film containers and 1/8" ID plastic tubing.

P/N 12-00686 .....



## SUNEX SX-10 TOUCH-UP GUN

Ideal for tight areas. Holds approximately one pint of paint.

P/N 12-01121 .....



## SUNEX SX-80B SPRAY GUN AND CUP

Ideal for heavy duty spraying, precision air cap and fluid nozzle, features vented lid, two fingered control for ease of operation, 1.3 mm fluid orifice, shipping weight (Lbs.) - 2.7

P/N 12-01712 .....

## AXIS HVLP PAINT SPRAYERS



The Axis series of paint sprayers is designed to take the guesswork out of choosing a spraying system which can be confusing for the homebuilder who is going to paint for the first time. Rather than offer a wide variety of sprayers, Axis has selected the best turbine for each type of product normally used to finish an airplane. This is the SP 2003 (three stage turbine) which is furnished with 30 feet of air delivery hose and the Lexair spray gun.

Select one of the three systems shown below based on type of material you will be spraying. If waterborne materials are going to be used, we can furnish systems for this process on a special order basis.  
 Sys. 1 to paint aircraft covered in fabric.....P/N 12-15920 .....  
 Sys. 2, to paint composite structure.....P/N 12-15930 .....  
 Sys. 3, to paint over metal or wood .....P/N 12-15940 .....

## ACCESSORIES

Lexair Gun.....12-01385 .....  
 Hose 40 .....12-01386 .....

TO

# SPRAY EQUIPMENT

## BINKS SPRAY EQUIPMENT



**MODEL 2001 AIR SPRAY GUN** - This new gun incorporates the best features found in most heavy-duty production guns. The new grip will reduce operator fatigue and improve control. It utilizes the new style fluid nozzle with six air passages. It weighs only 24 oz. and is perfectly balanced. The head is forged brass and the body is anodized forged aluminum alloy. Spray pattern is adjustable from round to fan with a full range of intermediate settings. Air Flow: 8.1 CFM @ 50 PSI with No. 66 fluid nozzle and No. 66SA air nozzle. Air connections - Fluid inlet - 3/8" NPS (m), Air

inlet 1/4" NPS (m). All parts replaceable. Made in U.S.A. Furnished with Model 81-350 DRIP-PROOF 1 Qt. attachable siphon cup. Wt. 3.25 lbs.  
 Model 2001 Gun and Cup.....P/N 12-04000.....  
 Gun Only .....P/N 12-04100.....  
 Cup Only .....P/N 81-350.....

## BINKS AIR HOSE



5/16" Dia. hose with standard 1/4" NPS connection at both ends.  
 5/16" Dia. x 25' Long.....P/N 71-1205.....  
 5/16" Dia. x 50' Long.....P/N 71-1206.....  
 A 5/16" diameter hose is recommended for efficient operation.

## STAINLESS STEEL PRESSURE ASSISTED 1 QUART CUP



Bink stainless steel pressure assisted 1 quart cup & attachment.  
 80-500 cup/lid assembly ... P/N 12-01332.....  
 82-367 cup gasket (poly) .. P/N 82-367.....

## BINKS MACH 1 HVLP



The Binks Mach 1 HVLP is a siphon-fed refinishing system that performs like your favorite conventional outfit but produces far superior transfer efficiency. A unique arrangement of air nozzle, fluid nozzle, and needle enable the Mach 1 to draw material from a standard siphon feed cup and avoid the need for a pressure cup. Eliminates the need for the operator to set fluid pressures. Delivers lower emissions for compliance with environmental regulations.

P/N	Description	Price
12-04410	MACH 1 Siphon Gun Only	.
98-1176	MACH 1 HVLP Siphon outfit -Spray Gun, 81-375 'No-Drip' Siphon Cup, &83-469 gun brush.	.

## DISPOSABLE PAPER CUPS



Utilizes disposable paper cups as paint reservoirs making color changes possible in seconds. Package of 50 cups.  
 P/N 01-00325 .....

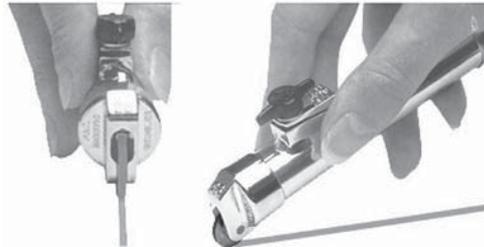
## BINKS MODEL 95 SIGNATURE SERIES SPRAY GUN



Model 95 spray gun employs the best features of Binks' most popular conventional air spray guns. This gun delivers higher quality finish, faster production, less operator fatigue, greater fluid compatibility, and more application versatility than any spray gun currently available. Model 95 is a high production gun with stainless steel fluid passages which may be used with most coatings. This new gun replaces Models 18, 62, and BBR spray guns, incorporating the best features of all 3: drop-forged anodized aluminum body, stainless steel fluid passages, adjustable floating needle valve, hardened steel or stainless steel fluid nozzle, plated drop-forged bronze self-centering air nozzle, brass air valve cartridge, adjustable spray pattern, 3/8" NPS (m) fluid inlet, 1/4" NPS (m) air inlet. Weight 1 lb., 11 oz.

Model 95 Hand Gun.....P/N 12-14150.....  
 Model 95 gravity feed hand gun with 1-1/3" alum. pint cup  
 P/N 12-04155 .....

## THE BEUGLER STRIPER PROFESSIONAL PINSTRIPING TOOL



The Beugler tool makes accurate lines consistently, without gravity or pressure, eliminating the need for tape. The unique serrated wheel and wheel head design are the secret to the stripers' success.

Ideal for any art project, the Beugler Striper is a professional tool used by auto, truck and motorcycle painters around the world. Beugler's magnetic guide securely holds to any steel surface, allowing the stripers' guide arm to slide smoothly along its recessed groove for long, accurate, straight, or arced lines. To ensure customer satisfaction, Beugler also offers a 40 minute video tape or DVD with instructions, tips and demonstrations. The Beugler Striper works well with any "creamy" consistency paint. You can stripe at any angle, as the tool is not gravity fed. Both Professional and Deluxe Kits are of the same quality and include guides, clean up brush, 2/3 oz. paint barrel (which stripes 250 to 1750 feet, depending on stripe size) and complete instructions. Length 4-1/4" O.D. 3/4".

Description	PN	Price
Deluxe Kit (Includes 3 Striping Heads)	12-01696	.
Professional Kit (Includes 7 Striping Heads)	12-01695	.

## WREN AIR BRUSH SET



Model No. 59-10005 includes 1/4, 1/2 and 2-1/2 fl. oz. color bottle assemblies, and 6 ft. plastic air hose with connections, packed in a durable styrene case. The Wren Air Brush is a "must" for retouching, special effects spraying and small parts finishing. Ship Wt. 20 oz  
 P/N 59-10006.....

## MINI-AIR POWERED VACUUM



Runs off of an air compressor and is simple to use. Just plug it into the air hose using the adapter (included) & start cleaning. The body of the unit is plastic or cast aluminum construction with an 18" clear plastic flex tube that can easily get into tiny spaces to clean. The canvas bag is easily removed. Wt. 8.5 oz.

Mini-Air Vacuum - plastic.....P/N 12-16820.....  
 Mini-Air Vacuum - aluminum.....P/N 12-16821.....  
 Spare Bag and Clip.....P/N 12-16825.....  
 36" Clear Flex Hose.....P/N 12-16830.....

TO

# AOM SPRAY EQUIPMENT

## AOM X SERIES GUNS - MAX 29 PSI



**6008SSPXX** - HVLP Water Base Spray gun, die cast aluminum body, low cfm [4-6], SS fluid passages. replace xx with 1.0, 1.3, 1.4, 1.5, 1.8, 2.0, 2.5 for tip size P/N 12-02136.....

**66-110** - 1 Qt aluminum cam-lock cup (Order Separate) P/N 12-02137.....

**130614** - HVLP Spray gun, drop forged body, for use with pressure pots P/N 12-02138.....

**130617** - HVLP Spray gun, drop forged body, with #66-110 cam-lock siphon cup P/N 12-02139.....

**1231SSXX** - Conventional spray gun with #66-110 camlock siphon cup replace xx with 1.8 or 2.0 1.8 ..... P/N 12-02140.....  
2.0 ..... P/N 12-02141.....

**6008XX** - Fluid nozzle, air nozzle and needle P/N 12-02142.....

**6008RK REPAIR KIT** - P/N 12-02143.....

## AOM R 200 - MAX 45 PSI SPRAY GUN



**662XX** - Low pressure HVLP spray gun only for high efficiency low cfm at 5-7 (Replace xx with tip size 1.3, 1.4, 1.5, 1.7, 2.0 2.5)

1.3 ..... P/N 12-02166.....

1.4 ..... P/N 12-02167.....

1.5 ..... P/N 12-02168.....

1.7 ..... P/N 12-02169.....

2.0 ..... P/N 12-02170.....

2.5 ..... P/N 12-02171.....

**663XX** - Low air consumption HVLP gun with syphon cup low cfm at 5-7. (Replace xx with tip size: 1.7, 2.0, 2.5)

1.7 ..... P/N 12-02172.....

2.0 ..... P/N 12-02173.....

2.5 ..... P/N 12-02174.....

**66-110** - 1 qt Cam- Lock Cup 2.0 ..... P/N 12-02137.....

**67999** - Seals and springs repair kit..... P/N 12-02161.....

**67-100** - 1 qt Pressurized aluminum cup with check valve and regulator P/N 12-02177.....

## AOM SX SERIES - MAX 30 PSI SPRAY GUN



Gravity spray gun kit 600 cc. aluminum cup, 5 CFM @ 30 PSI

**ECO/SX HVLP** - Spray gun kit includes 3 needle/nozzle sets 1.0, 1.4, 1.7mm, 1 - 600cc aluminum cup #18501SE, 2 cleaning brushes and wrench in carrying case P/N 12-02130.....

**ECO/SX N/N** - aircap kit 1.0,1.2,1.3,1.4,1.7,2.0 (replace xx with tip size) P/N 12-02131.....

**K1/SX HYBRID** - high transfer efficiency Spray gun kit. Includes same as above P/N 12-02132.....

**K1/SX N/N** - aircap kit 1.0,1.2,1.3,1.4,1.7,2.0 (replace xx with tip size) P/N 12-02133.....

**REPAIR KIT** - P/N 12-02134.....

**ALUMINUM GRAVITY CUP** - 1000 cc (35 oz) P/N 12-02135.....

## AOM ECO/MINI HVLP GUN KIT - MAX 43 PSI



**61-210** - HVLP Mini Gravity Gun Kit includes 200cc aluminum cup, 4 glass jars, 12' air hose with quick disconnect, filter, 2 adapters, cleaning brush and wrench in carrying case. This unique kit has all the necessary parts to convert from a Mini Gun to an Air Brush P/N 12-02144.....

**61-2006XX** - Fluid nozzle, air nozzle and needle -(replace xx with 0.8, 1.0, or 1.2 for tip size)

0.8 ..... P/N 12-02145.....

1.0 ..... P/N 12-02146.....

1.2 ..... P/N 12-02147.....

**61-210SE** - 200cc Nylon Cup ..... P/N 12-02148.....

**61-220SE** - 200cc. Aluminum Cup ..... P/N 12-02149.....

**61-200OR** - Repair kit ..... P/N 12-02150.....

**828-W XX** - Mini Gravity Glazing Gun with 200cc aluminum cup. Comes with air nozzle for sprayable products. (Complete) replace xx with 1.0 or 1.5

1.0 ..... P/N 12-02151.....

1.5 ..... P/N 12-02152.....

**828-GTXX** - Glazing nozzle kit c/o fluid nozzle, air nozzle and needle. ( Complete for both sprayable and non sprayable materials) replace xx with 1.0 or 1.5

1.0 ..... P/N 12-02153.....

1.5 ..... P/N 12-02154.....

## AOM E70 CONVENTIONAL SPRAY GUN



This Gravity Gun is ideal for applying a wide range of materials such as Primers, Fillers, and Virtually all Wood Coatings

**137XX** - E70 Gravity Gun with 500 cc. aluminum cup with nylon cover P/N 12-02228.....

**138XX** - E70 Gravity Gun with 750 cc. aluminum cup with nylon cover P/N 12-02229.....

**121XX** - Fluid nozzle, air nozzle and needle replace xx with 1.0, 1.2, 1.4, 1.5, 1.6, 1.8, 2.0, 2.2, 2.5, 3.0 mm. P/N 12-02225.....

**12630A** - Seals and springs repair kit for E70 P/N 12-02231.....

**17000SE** - 500cc. nylon cup with cover P/N 12-02232.....

**15120SE** - 500 cc. Aluminum cup with nylon cover P/N 12-02233.....

**14320SE** - 750 cc. Aluminum cup with nylon cover P/N 12-02234.....

## AOM 1 QUART PRESSURIZED CUP (HVLP)



RP-XX - R200 HVLP spray gun, pressurized aluminum cam-lock cup, regulator and check valve (replace xx with tip size. 1.3, 1.4, 1.5, 1.7, 2.0, 2.5 ) This outfit is perfect for small painting jobs that require precise fluid control. Can spray thicker material. Maximum cup pressure 10 PSI

1.3 ..... PN 12-02180.....

1.4 ..... PN 12-02181.....

1.5 ..... PN 12-02182.....

1.7 ..... PN 12-02183.....

2.0 ..... PN 12-02184.....

2.5 ..... PN 12-02185.....

## AOM G70 CONVENTIONAL SPRAY GUN



**127XX** - Spray gun with 1qt. Cam-lock cup P/N 12-02223.....

**125XX** - Pressure fed spray gun only with 3/8" fluid inlet P/N 12-02224.....

**121XX** - Fluid nozzle, air nozzle and needle replace xx with 1.0, 1.2, 1.4, 1.5, 1.6, 1.8, 2.0, 2.2, 2.5, 3.0mm. P/N 12-02225.....

**66-110** - 1 Qt. Cam-lock cup P/N 12-02137.....

**12632A** - Seals and spring repair kit for G70/A or SSP P/N 12-02227.....

## AOM K4 CONVENTIONAL SPRAY GUN



Ultra compact and light spray gun featuring a reduced air consumption. 1 qt. cam-lock cup

**1206XX** - K4 Spray gun with standard cam-lock cup replace xx with 1.0, 1.3, 1.5, 1.8, 2.0mm P/N 12-02236.....

**208XX** - K4 SSP Spray gun only. Nozzles same as above P/N 12-02237.....

**207XX** - Fluid nozzle, air nozzle and needle for K4 (replace xx with nozzle size) P/N 12-02238.....

**20895A** - Seals and springs repair kit for K4 P/N 12-02239.....

**66-110** - 1 qt. aluminum cup with cam-lock P/N 12-02137.....

## AOM PQ CUP GUN



99518 - PQ Cup Gun Economical high pressure air spray gun P/N 12-02242.....

## AOM AR UNDERCOATING GUNS

Tough aluminum body. 1000 cc (35 oz) siphon cup. Sprays virtually all materials. 31500 - AR Spray Gun P/N 12-02241.....



## THE Q SERIES HVLP TURBINE UNIT EMITS 50% LESS NOISE THEN REGULAR TURBINES



PRO 3 - 110V, 3 Stage turbine unit, 101 CFM @ 6 PSI comes with gun, cup, 25' hose and coupler. Perfect for cabinet makers, furniture refinishers and most trades. Spray cabinets, furniture, autos or pianos. P/N 12-02108.....

PRO 4 - 110V, 4 Stage turbine unit comes with gun, cup, 25' hose and coupler. The most powerful 4 Stage available. Perfect for paint contractors spraying Latex house paints, cabinet makers, furniture refinishers and most trades P/N 12-02109.....

XT 2 - Turbine spray gun & cup P/N 12-02110.....

**WARRANTY: All systems 24 months -Parts & Labor**

TO

# AOM SPRAY EQUIPMENT

## AOM DUAL ACTION AIRBUSH KIT



### AB1104C WA -

- \* Double action trigger for air-paint control
- \* Precision machined nozzle and fluid cap
- \* Suitable for graphic artwork
- \* Fluid nozzle: 0.5 mm

P/N 12-02217 .....



### AB1117K -

- \* Double action trigger for air-paint control
- \* Precision machined nozzle and fluid cap
- \* Suitable for graphic artwork

Contains: 1 - Airbrush, 1 - Hose, 1- Wrench 1 - Jar Adapter, 1 - 5 cc. Paint cup Fluid nozzles - 1 of 0.3, 0.5, 0.7mm 2 - 22cc glass jar, 1 - 50 cc glass jar  
P/N 12-02218 .....



**AB1117C** - Double action trigger for air-paint control, precision machined nozzles -air and fluid, suitable for graphic artwork. 0.5 bottom feed with glass jar  
P/N 12-02219 .....

## AOM MINI AIR BRUSH COMPRESSOR



AC18 1/8 HP Mini air brush compressor (Piston Type) with filter, micro switch and 10' retractable air hose (Airbrush Not Included)  
P/N 12-02221 .....

## AOM 2 QT PRESSURE POT OUTFIT



**RP-XX** - 2 Qt. pressure pot outfit includes an R100 mini gun, 2 qt. pressure pot with regulator and 6' air and fluid hose with fittings. This outfit is especially designed to spray in hard to reach areas. Suitable for both water and solvent base material.  
P/N 12-02186 .....

**75-11187WB** - 2 Qt. pressure pot outfit includes an 878WB mini gun, 2 qt. pressure pot with regulator, 5' air hose with fittings, 5' clear fluid hose with SS fittings, adapter and SS elbow. Other tip sizes available 0.8, 1.2 and 1.5  
P/N 12-02188 .....



**KIT-R** - Retrofit kit consists of adapter, SS elbow, 5' air hose with fittings and 5' clear fluid hose with SS fittings  
P/N 12-02189 .....

**75-112** - 2 Qt Gasket  
P/N 12-02187 .....

## AOM 2-1/2 GAL PRESSURE POT OUTFITS



**65-9121305-1.4** - 2 1/2 Gallon pressure pot outfit includes a 2 1/2 gallon pressure pot dual regulated, X series spray gun (available in 1.3, 1.4, 1.5, 1.8, 2.0) and 25' 1/4" air and fluid hose with fittings. This outfit is perfect for small to medium production facilities. Suitable for glues, lacquers, stains, water based and solvent based materials. OPTIONAL: 5/16" air hose and 3/8" fluid hose available on request at an additional cost.  
P/N 12-02191 .....

**65-914 GASKET** P/N 12-02119 .....

## AOM PRESSURE TANKS 2 QT. REMOTE



**75-111** - 2 qt remote pressure tank, single regulator, safety relief valve, handle, lightweight, SS pick up tube, Screw type top. Dual regulated available.  
P/N 12-02111 .....

**75-111S** - Large Mouth 2 qt. remote pressure tank, teflon coated inside, single regulator, safety relief valve, handle, lightweight, screw type top. Dual regulated available.  
P/N 12-02112 .....

**75-111** - Replacement gasket for 2 qt remote pressure tank  
P/N 12-02113 .....

**65-424/1** - Replacement gasket for 2 qt large mouth remote pressure tank  
P/N 12-02114 .....

**75-111SS** - 2 qt all stainless steel remote pressure tank, single regulator, safety relief valve, handle, lightweight, screw type top.  
P/N 12-02115 .....

**75-112SS** - Replacement gasket for 2 qt all stainless steel remote pressure tank  
P/N 12-02116 .....

## AOM PRESSURE 2-1/2 GALLON TANKS



**65-911** - 2-1/2 gal. pressure tank, single regulator, Teflon coated inside and outside Safety relief valve, pick-up tube with filter, wide lid and low side walls, large wheels for easy movement. P/N 12-02117 .....

**65-912** - Same as above with dual regulators  
P/N 12-02118 .....

**65-914** - Replacement gasket for 2 1/2 gal. tank  
P/N 12-02119 .....

**AT2.5ASS** - 2.5 gal pressure tank, air agitator, stainless steel inner liner, dual regulators, stainless steel fitted.  
P/N 12-02120 .....

**65-0097** - Complete regulator assembly for 2 1/2 gal tank  
P/N 12-02121 .....

**65-0098** - Complete second regulator assembly for 2 1/2 gal tank only  
P/N 12-02122 .....

**65-0099** - Double regulator assembly for 2 1/2 gal tank  
P/N 12-02123 .....

## AOM ACCESSORIES



**AOM AIR BRUSH HOSE MCR011** - 10' Air brush hose 1/4" F X 1/8" F  
P/N 12-02220 .....



**AOM GUN HOLDER RP 8413** - Gravity gun holder  
P/N 12-02216 .....



**AOM DISPOSABLE LINERS** - Disposable Liner round bottom fits # 65-911 & # 65-912 (10pk)  
P/N 12-02124 .....

Disposable Liner flat bottom fits # AT2.5ASS tank (12pk)  
P/N 12-02125 .....

Disposable Liner round bottom fits #65-911 & #65-912 (Same as 65-913-12 but is a pack of 60)  
P/N 12-02126 .....

Disposable Liner round bottom fits 5 gal pressure tanks (24pk)  
P/N 12-02127 .....

2 1/2 & 5 gal. bag tank liners 4 mil. (10 pk)  
P/N 12-02128 .....

Disposable Liner for 10 gal. pressure tanks (10 pk)  
P/N 12-02129 .....

**AOM HARD CUP KITS** - Can be mounted on any AOM spray gun.



**DC 195-12** - Kit contains 12 Soft Liners, 12 Rings, 12 Lids w/Filters, 12 Caps, 1 Hard Cup and 1 Adapter  
P/N12-02203 .....

**DC 195-12** - Kit contains 12 Soft Liners, 12 Rings, 12 Lids w/Filters, 12 Caps (Used with DC 191 Hard Cup)  
P/N12-02204 .....

**DC 190-48** - Kit contains 48 Soft Liners, 48 Rings, 48 Lids w/Filters, 48 Caps (Used with DC 191 Hard Cup)  
P/N12-02205 .....

**DC 191** - Hard Cup (750 ml capacity)  
P/N12-02206 .....

**DC 192** - Adapter used with all AOM gravity guns (except Mini gun)  
P/N12-02207 .....

**DC 193** - Adapter used with all AOM pressure guns  
P/N12-02208 .....

**DC 194** - Shaker Cap  
P/N12-02210 .....



**68-9637** - Air regulator w/gauge, 1/4" F swivel connection & 1/4" M NPS connection  
P/N 12-02213 .....

**68-9638** - Mini air regulator w/gauge, 1/4" F swivel connection & 1/4" M NPS connection  
P/N 12-02214 .....

**61-2031** - Air adjustment Valve  
P/N 12-02215 .....

**AOM QUICK COUPLERS** -  
**41106** - 1/4" Brass Male thread  
P/N 12-02196 .....

**41156** - 1/4" Brass Female thread  
P/N 12-02197 .....

**AOM QUICK CONNECTORS** -  
42200 - 1/4" Brass High Flow male ..... P/N 12-02198 .....

45600 - 1/4" Brass Std. flow male ..... P/N 12-02199 .....

42300 - 1/4" Brass High Flow female ..... P/N 12-02201 .....

45700 - 1/4" Brass Std. flow female ..... P/N 12-02202 .....

**AOM MAINTENANCE KIT** - Spray gun maintenance kit includes 12 special steel cleaning needles. Perfect for removing dry paint particles from air cap and nozzle as well as all difficult to reach gun parts.  
P/N 12-02107 .....

**AOM SPRAY GUN LUBE 811-12** - Spray gun lube 12 pcs/Counter Display Box  
P/N 12-02211 .....



**AOM 18 PC SPRAY GUN CLEANING KIT KK118** - 1 - Extra long 12" Pick-up Tube Brush 1 - 1/4" HVLP Brush 1 - 1/2" Body Cavity Brush 1 - Detail End Brush 2 - Nylon - Bristol Parts Brush 5 - Miniature Brush Set 6 - Precision Needle Set 1 - O-ring Removal Tool  
P/N 12-02212 .....

TO

# TIG TORCHES - TIG WELDERS - WELDING CARTS

## ASK MISTER TIG DVD



Learn how to tig weld with the best!! Mister TIG (Wyatt Swaim-30 years of aerospace welding experience) will teach you the fundamentals and launch your tig welding training. This 34 minute DVD will teach you the proper torch angle, tungsten preparation, tungsten stick-out, and the proper "dabbing" of the filler rod technique. This instructional DVD will help you set up your machine for the correct procedures including aluminum (alternating current), and 4130-cro-mo (DC-).

**Mister TIG** The DVD is also packed with tig information and is designed for the beginner tig operator and will even help the intermediate operator.

P/N 13-05751 .....

## TIG CALCULATOR



Just tell it what material you're welding, the thickness, and type of weld (butt, lap, etc.), and it will give you information concerning your weld such as travel speed, number of passes needed, tungsten type and size, what amperage to run, and speed of welding. Slide rule style.

P/N 12-00444 .....

## TIG TORCHES & REPLACEMENT CABLES



**PTA-9F** - Air-cooled TIG torch, rated 125 amps at 60% duty cycle. Includes a 12-1/2 foot Superflex Cable. Equipped with a flexible head for easy maneuverability into tight places.

P/N 12-00391 .....

**REPLACEMENT CABLE** - 12-1/2 foot Superflex replacement cable for the PTA-9F

P/N 12-00399 .....



**PTA-17H** - Air-cooled TIG torch, rated 250 amps at 60% duty cycle, heavy duty. Equipped with a 12-1/2 foot Superflex Cable

P/N 12-00392 .....

**REPLACEMENT CABLE** - 12-1/2 foot Superflex replacement cable for the PTA-17H

P/N 12-00401 .....

## TIG TORCH ACCESSORY KITS



**9GL KIT** - TigDepot Parts Kits provide all the torch accessories you need to start welding. Parts Kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.

The 9GL-Kit comes with .040, 1/16, 3/32 Collets, Gas Lens Collet Bodies, Gas Lens Nozzles, (#5, #6, #7), a long Back Cap, and an assortment of 2% Thoriated and Ceriated Tungsten in a convenient plastic box. For the 9 Series torches

P/N 12-00393 .....

**17H-GL KIT** - The TigDepot 17H Gas Lens Kit is made specifically for the 210 Amp 17H Torch.

**The Kit includes One of each:**

- 2% Thoriated Tungsten .040, 1/16, 3/32 DIA.
- Alumina cups #5,6,7
- Gas lens .040, 1/16, 3/32
- Collets .040, 1/16, 3/32
- Backcaps-short, medium, long
- Insulator
- Tool box

PN 12-00394 .....

## TIG BUZZ BOX KIT



TIG weld Aluminum, Stainless Steel, Chrome Moly, and many other metals. Plug it directly into your standard household outlet (110 volts, 15amps). **Kit includes:** • CK9 Rigid Torch w/ Valve and 12.5' one piece cable with male dinse connector. • Flowmeter Regulator •

Adapter Plug with 1' extension cord • Female Dinse to allow you to go back and forth to stick welding. • AK-4 Accessories Kit • AMP Conversion Decal • Instruction Manual

P/N 12-00389 .....

## TIG WELDERS / WELDING EQUIPMENT

### INVERTEC V155-S TIG READY-PAK



- Weighing in at just under 15 lbs. (6.8 kg) it is no lightweight contender. It packs the full punch of a heavyweight professional that you can take to the most demanding jobs. With 120/230V auto reconnect operation, it can operate from a portable generator. It can also plug into a 200 foot (61 m) 230V extension cord (not included) so you can weld just about anywhere. The Dent resistant case is IP23 rated for outdoor use. P/N 12-01978 .....



### PRECISION TIG 225 READY PAC

- Unit Includes: Precision TIG 225, Torch Parts Storage Compartment, Torch Hanger, 10 ft. Work Cable and Clamp, Removable Lift Eye, 9 ft. Input Power Cord, NEMA 6-50P Plug, NEMA 6-50R Receptacle, TIG Procedure Guide, GTAW (TIG) Handbook, PTA-17 Pro-Torch TIG Torch (12.5 ft., 1-piece), Gas Regulator with Hose, and Foot

Amptrol® (K870). Shipped fully assembled. Shielding gas sold separately. P/N 12-01634 .....

**TIG 225 With Understorage Cart**.....P/N 12-01635 .....

### POWER MIG 140C



- Power MIG® 140C (K2471-1) with continuous voltage control for more critical projects where precise adjustment is required. Diamond Core Technology™ and the rugged drive system aid arc performance for MIG welding on thin gauge steel, stainless and aluminum. Or, use gas-less flux-cored welding for deep penetration on thicker steel, even outdoors! With a wide 30-140 amp welding output range it is the highest output in 120

volt input power welder class. MIG weld 24 gauge up to 10 gauge (.135") sheet metal in a single pass. Includes: • Magnum 100L welding gun (K530-6) • Six spare contact tips • Gas and gasless nozzles • Work cable and work clamp • Adjustable gas regulator and hose •.025 and .035 smooth drive rolls •.030-.045 knurled drive roll •.025-.035 wire guide • 2 lb. spool .025" Super Arc® L-56 wire • 1 lb. spool .035" Innershield® NR-211-MP self-shielded flux-cored wire • 8" spool spindle adapter • How to Use DVD. P/N 12-01623 .....

### PRO-CUT 25 PLASMA CUTTER



- The Pro-Cut 25 combines the next generation of plasma technology and enough power to easily cut 3/8" mild steel in a package that weighs only 29.5 lbs. (13.4 kg). The power source automatically reconnects between 115V or 230V for easy set-up. This further extends the flexibility of this plasma unit. Easy to use with its back lit LED status lights, 15 ft. plasma torch, and integral air controls.

P/N 12-00783 .....



### V205-T AC/DC INVERTEC

- For TIG and Stick

**Welding.** Ideal for critical AC or DC TIG Welding applications. Variable AC frequency allows you to focus the arc when precise arc control is required. The 115/230V auto-reconnect makes the V205-T AC/DC truly flexible. The unit comes with a 10 ft. 230V input cord and plug; a Twist-Mate Torch Adapter for 9 and 17 Series one piece torches; Twist-Mate adapter for work cable; and adjustable shoulder strap. This full featured TIG Welder is also capable of Stick Welding. P/N 12-00384 .....

**One-Pak™** Package Includes: V205-T Foot Amptrol (K870) and TIG-Mate 17 Starter Kit. Assembly required. P/N 12-00776 .....

## WELDING CARTS

These Welding carts are for the Invertec V-155, Invertec V-205T AC/DC, Procut 25 Plasma Cutter, and Power MIG 140C.



### K520 WELDING CART

- (150 cu.ft. bottle capacity) Accommodates power source, gas cylinder, tools and welding accessories. Includes adjustable handle, front casters, and rear wheels. Dimensions (HxWxD): 30 (min.)/34 (max.) x 18 x 35 inches. Physical specifications: Weight:38 lbs. (17.2 kgs.) Dimensions (in) H x W x D : 34 x 18 x 35 Dimensions (mm) H x W x D : 864 x 457 x 889

P/N 12-00773 .....



### K2275-1 WELDING CART

- (80 cu.ft. bottle capacity) Full-featured cart is designed to store and transport a welder, 80 cubic foot gas cylinder, welding cables and accessories. Includes an angled top shelf for easy access to welder controls, a lower tray for added storage space, a sturdy handle and a convenient cable wrap hanger. Replaces K520. Physical specifications:

Weight:24.75 lbs. (11.2 kgs.) P/N 12-00777 .....

TO

# TIG WELDING EQUIPMENT & ACCESSORIES

## MAGNETIC UNI-JIGS



Magnetic holders for hands-free support in a variety of applications. Designed to last a life time. Each angle is screwed (not riveted) completely through the magnet to insure proper angles.

Small (supports up to 45 lbs.) P/N 12-05185 .....  
Large (supports up to 80 lbs.) P/N 12-05186 .....

## HARRIS MODEL 15 CLASSIC TORCH HANDLE



The Model 15 is a lightweight, aircraft style featuring a forward valve designed to permit changing flame settings with one hand. For welding, heating and brazing with fuel gases. • Class A 3/8"-24 hose connection • Cap: Cuts 2", welds to 5/16" • UL listed • Length: 5-3/4", Wt: .5 lbs.

Torch Handle ..... P/N 12-00687 .....



B-15-3 Mixer ..... P/N 12-00688 .....



Welding Tip ..... P/N 12-00689 .....

**Torch Handle Kit** - Torch, Mixer and Tip  
P/N 12-00690 .....



## TIG TUNGSTEN

Sold in packages of 10

**2% Thoriated**  
1/16 ..... P/N 12-00438 .....  
3/32 ..... P/N 12-00439 .....

**2% Ceriated**  
1/16 ..... P/N 12-00440 .....  
3/32 ..... P/N 12-00441 .....

**Pure**  
1/16 ..... P/N 12-00442 .....  
3/32 ..... P/N 12-00443 .....

## TIG FILLER MATERIALS



36" Cut Lengths are packaged in 1 lb. tubes to provide you the flexibility of buying only what you need for your job.

Base Material	Use Filler	Size	Part No.	Price/Lb.
4130	ER80S-D2	.035	12-00473	.
4130	ER80S-D2	.045	12-00474	.
4130	ER80S-D2	.062	12-00475	.
4130	ER70S-2	.035	12-00477	.
4130	ER70S-2	.045	12-00478	.
4130	ER70S-2	.062	12-00479	.
Aluminum	ER4043	.045	12-00480	.
Aluminum	ER4043	.062	12-00481	.
Aluminum	ER5356	.045	12-00482	.
Aluminum	ER5356	.062	12-00483	.
Stainless Steel	ER312	.035	12-00484	.
Stainless Steel	ER312	.045	12-00485	.
Stainless Steel	ER312	.062	12-00486	.
Stainless Steel	ER308L	.035	12-00487	.
Stainless Steel	ER308L	.045	12-00488	.
Stainless Steel	ER308L	.062	12-00489	.
Inconel	NICKEL 625	.035	12-00490	.
Inconel	NICKEL 625	.045	12-00491	.
Super Alloys	ALLOY W	MKT	Special Order	Call
Titanium	TITANIUM	MKT	Special Order	Call
Magnesium	TITANIUM	MKT	Special Order	Call

## BRAZING AND SILICON BRONZE



.062 ..... P/N 12-00470 .....

## STEELMAN WELDING BENCH



\* 24 x 44 stretch metal grid table top w/grounding post and welding holster  
\* Scissor action for quick and easy set up and tear down  
\* Adjustable legs for easy leveling  
\* No metal-to-metal contact on any hinge points  
\* 500 lbs. weight capacity  
PN 12-02106 .....

## SMALL OXY-ACETYLENE KIT



With regulators. Designed for hobby, crafts, plumbing, etc. Braze and solder material from the thinnest up to 1/8" thick steel, melt up to 3 oz. silver. Provides stable and precise concentrated feather flame up to 6000°F for various materials such as metals, ceramics, and glass.

P/N 12-00447 .....

## CUTTING TORCH ATTACHMENT



Cuts up to 3". Spiral tube mixer design optimizes the mixture of fuel and oxygen. Stainless steel tubes and lever. "A" hose fitting, 3/8"-24 thread.

P/N 12-00448 .....

## BOTTLES AND TOTE



Plastic Stand, Oxygen and Acetylene Cylinders - Plastic Cylinder Stand holds "MC" Acetylene Cylinder and "R" Oxygen Cylinder.

Plastic Cylinder Stand

P/N 12-00449 .....

"MC" Acetylene Cylinder (Empty)

P/N 12-00451 .....

"R" Oxygen Cylinder (Empty)

P/N 12-00452 .....

## COW HIDE GLOVES



These are a good import, not too stiff.  
P/N 12-05155 .....

## 38" LEATHER WELDING APRON



Quick release buckle and cross straps make it very comfortable; it also has pockets.

P/N 12-05160 .....

## FULL FACE SHIELD



Lightweight headgear, shield flips down over prescription glasses. Good over bifocals.

P/N 12-05175 .....

## WA-GOGGLE

Gas welding goggle with adjustable headrest that pulls out and down. Permits easy use of eyeglasses. 2 x 4 lens.

P/N 12-05165 .....



## OXY-ACETYLENE HOSE



3/16" hose that may be used with all welding outfits.

**B-B FITTING -**

12' ..... P/N 12-05916 .....

25' ..... P/N 12-05917 .....

**A-B FITTING -**

12' ..... P/N 12-05918 .....

25' ..... P/N 12-05919 .....

## HENROB 2000 IV WELDING TORCH



The revolutionary design of the Henrob 2000 Torch makes it the ideal welding torch for aircraft construction. The Henrob 2000 allows less oxidation, minimal flux, reduced pressures and substantial materials savings. Fewer tips are required and hose fatigue is lessened. Perfect for steel and aluminum welding and cutting. Highly recommended by many aircraft builders.

Formerly known as the Dillon Mark III ..... P/N 12-16000 .....

**Henrob Instructional Video** ..... P/N 12-05150 .....

## PORTASOL CORDLESS BUTANE SOLDERING TOOL KIT



Contains four different tools. Simple tip/accessory installation allows you to convert into a soldering iron, blow torch, hot blower or hot knife within seconds. Ideal for aircraft, automotive, marine and home use. The hot knife will quickly cut and seal

repairs on dacron, mylar and nylon. The soldering iron is ideal for working on electronics and avionics. Portasol is lightweight and fits easily in a tool box. Features cordless, go-anywhere versatility, 90 minute continuous use capacity, refills in 20 seconds with standard butane lighter fuel, and full 2 year warranty. Kit includes Portasol soldering tool with 2.4 MM tip, hot knife, blow torch, hot blower, cleaning sponge, safety stand and rugged plastic storage case.

P/N 12-20600 .....

TO

# WELDING EQUIPMENT - BLASTING SYSTEMS

## SMITH WELDING OPTIONAL EQUIPMENT

### SERIES 30™ TWO STAGE REGULATORS

H1421A-510 for Acetylene, 0-15 PSI  
P/N 12-01186 .....  
H1410A-540 for Oxygen, 0-150 PSI  
P/N 12-01185 .....  
For the professional. Heavy duty, w/check valves.

**AC309 AIRLINE™ - STANDARD DUTY CUTTING ATTACHMENTS** - Cutting capacity up to 3" thick (76mm) steel. Head Angle 90° USE IN: Torch Handles - AW1A, AW10A. P/N 12-01082 .....

**CUTTING TIP** - Slip-in cutting tips for general medium duty hand cutting. Use with medium pressure acetylene and oxygen. USE IN: Cutting Attachments - DG109A, MC505, MC509, CC509P (all sizes); AC309 (Maximum tip size MC12-4). P/N 12-01192 .....

**HUNTSMAN FACE SHIELD** - Dark green plastic window 8" x 11-1/2" snaps onto lightweight plastic adjustable headband. Permits full peripheral vision during work. Protects against radiation - flip up visor when not in service. Headband - Model K .....P/N 12-05000 .....  
Visor .....P/N 8124D.....  
Complete Shield .....P/N 12-05100 .....

### HUNTSMAN ELECTRONIC WELDING HELMET

Call for prices and information on the new Huntsman Autoview Welding Filters which provide uncompromising eye protection.

**WELDVIEW GOGGLES** - Full protection against radiation and impact in gas welding, cutting, burning and brazing. Can be worn over personal glasses. Glass cover plate and Filterweld plate supplied. Meets requirements of American National Stds. Inst P/N 12-04910 .....

**TIP CLEANER SET** - 13 cleaners for #49 - #75 drill size orifices. P/N 12-01195 .....

### SINGLE STAGE REGULATORS

Gas Used: Oxygen Delivery Pressure: 0-100 PSIG, 0-7 Bar .....P/N 12-19300 .....  
Gas Used: Acetylene Delivery Pressure: 0-15 PSIG, 0-1 Bar .....P/N 12-19400 .....

**STANDARD DUTY TORCH HANDLE** - Inlet connections 3/8" - 24 right and left hand, fit "A" size hose nuts. Cuts up to 3" (76mm), welds up to 1/2" (13mm). Covered by the LIFETIME Warranty & Service Agreement. USED WITH: Cutting Attachment - AC309. Welding Tips - AW200 Series, AW400 Series. P/N AW1 .....

**AW200 AIRLINE™ SERIES OXY-ACETYLENE** - USE IN: Torch Handles - AW1A & AW10A.

For Metal Thickness Up To	Part No.	Price
1/32"	AW201	.
1/2"	AW203	.
1/8"	AW205	.

**ONE SINGLE FLINT LIGHTER** - P/N 12-01194 .....

**Box of Six Extra Flints for Lighter**  
P/N 12-01193 .....

**TWIN HOSE** - 12-1/2 Ft. (3/16" I.D.)P/N RA921.....

**ONE PAIR AMERICAN OPTICAL WELDVIEW GOGGLES**  
P/N 91225 .....

### TIP CLEANERS

Quality aluminum case with rustproof stainless steel wire. The long spiral cleans a large number of tip styles. A hardened steel file included in each case. P/N 12-05180 .....

### BULLDOG RED WELDING DAMAGE CONTROL CLOTH

This heavy duty red cloth is made from .015" thick fiberglass with a Hypercote finish. It resists abrasion and liquids, cuts without fraying, is electrically non-conductive and chemical resistant, and drapes easily. P/N 12-19500 ...../lineal yd.

### SILVER PENCILS

The best way to mark tubing. Will not corrode tubing and shows up well on greasy tubing. May be used to mark exhaust system without lead cracking P/N 12-05190 .....

## ECONOMY PORTABLE SAND BLASTING SYSTEM



A new portable blasting system for cleaning and surface preparation of metal, plastic, fiberglass or wood. Ideal for graffiti removal from brick or stone surfaces. Dee-Blast system consists of an abrasive hopper 20-1/2" high and 9-1/2" diameter molded PVC drum with tight fitting top to keep abrasive media clean. Hopper holds up to 65 lbs. of media. It has a 10 ft. long rubber hose, a full-length face shield and a trigger-operated blasting gun that completely mixes air and media to produce a uniform spray pattern. P/N 130 .....

## PORT-A-BLAST SANDBLASTER



The Port-A-Blast sand blast unit is the perfect tool for anyone who owns or flies an airplane. For removing paint and corrosion, cleaning spark plugs and even liquid blasting to clean your engine and parts. Its small compact design allows you to get into tight areas. Fill the container with an abrasive material and its ready to go to work. It will operate on as low as 60 psi. However, for best results, pressures of 100-500 psi are recommended. The higher

the pressure the faster the cutting will be. Port-A-Blast handles all types of abrasive, ranging from Silica Sand for average work to Nutshells for cleaning and polishing hard surfaces without scratching. For larger jobs you are also able to attach a siphon hose, and pull directly from a bucket. this is a versatile tool that every airplane enthusiast shouldn't be without. We now offer a kit for the enthusiast who's not quite sure which type of blast media the should use. The kit includes a Port-A-Blast gun and 4 media types: Glass Bead, Steel Shot, Nutshell, and Slag. We have also included a brief explanation of each media type and where it should be used.

Port-A-Blast gun..... P/N 12-00172 .....  
Flexible siphon tube ..... P/N 12-00173 .....  
Replacement Ceramic nozzle ..... P/N 12-00493 .....

## DELUXE PORTABLE PRESSURE BLAST SYSTEMS



Model 1000

These Portable Pressure Blasters are designed to make the most efficient use of your air and abrasive supply. These are not inexpensive siphon units. The entire tank is filled with air and sand under pressure. When the nozzle and valve is opened the sand/air mixture is released under tremendous pressure to quickly remove paint, rust, scale and other coatings. These units are 3-5 times faster to use than siphon units. All units arrive complete with air gauge, pressure vessel, sandblast hood, and sandblast hose. Simply fill with abrasive and attach to your air supply and you are ready to begin blasting. Order by Part no.

**ABRASIVES** - Black Beauty: Economical, fast cutting abrasive. For quick removal of paint and rust. 80# bag. P/N 12-20740.....



Model 400

Spec. Chart	Model 400	Model 1000
Operating Pressure	60-125 psi	60-125 psi
ASME Tank	No	Yes
Sandblast Hose	7 feet	10 feet
Abrasive Capacity	40-50 lb.	100-120 lb.
Nozzle Size	3/32"	1/8"
Part Number:	12-20725	12-20735
Price:	.	.

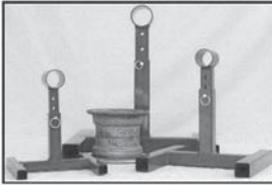
## CENTURION TEAR-N-WEAR PROTECTIVE LENS COVERS



Each AOSAFETY Centurion® goggle TEAR-N-WEAR replacement lens protectors stack contains seven layers of high quality optically clear film. When the outer layer is soiled, scratched, or difficult to see through, simply "tear" the soiled layer off by pulling the tab horizontally from right to left. You now have clean and clear vision again and the next tab is automatically ready for your next tear away. P/N 12-00894 .....

TO

# SCALES - ROTATORS - TIRE BEAD BREAKERS



## LANDING GEAR SAFETY STAND

The "Landing Gear Safety Stand" is a must! Anyone that has ever seen a plane slip off a jack knows! The stand slips on over the axle when ever the wheel is removed. Put the nut back on and the plane can't slip off the stand. It adjusts for height with a quick release pin. The

wide, stable "H" base is made from heavy gauge square steel tubing for strength, safety and durability. The unique stand is finished in an attractive, bright red powder coat finish. LGSS-2, has a 12" x 12" base with adjustable axle height of 10"-15", and LGSS-3 has an 18" x 18" base with adjustable height of 14"-21.5".

- 9" Stand ..... P/N 12-02015 .....
- 12" Stand ..... P/N 12-00255 .....
- 18" Stand ..... P/N 12-00256 .....



## STRUT SERVICE TOOL

Service Strut in your Sunday Suit.

- Clean way to service struts.
  - Strut valve core is NOT removed.
  - Hose fitting releases pressure & fluid into the bottle.
  - Raise & lower strut a few times, then apply the charge.
- P/N 12-16792.....

## PRO SERIES STRUT SERVICE TOOL



The Pro Series Strut Service Tool has all the great attributes of the original Strut Service Tool, with the addition of a dual tank and dual check valve design. The longer service hose makes it easy to attach. Strut pressure, fluid and foam is captured in one tank. Clean, foam-free fluid is drawn back into the strut from the second tank. Simplicity, cleanliness and less waste make this tool a must-have. The strut valve core is not removed. P/N 12-00677 .....

## AT508K CANNON CONNECTOR PLIERS



The AT508K features serrated jaws for improved gripping and a slip joint for improved leverage. Ideal for all common cannon connector applications. P/N AT508K.....

## PRECISION AIRCRAFT SCALES FOR ACCURATE WEIGHT & BALANCE



Checks aircraft weight and balance after modifications or fitting of new accessories. Flight safety is improved by periodic weighing to verify weight and balance is within limits. Simply roll the aircraft up the ramps onto the scales or jack the wheels and slide the pads under tires. A single high performance strain gauge load cell is

in each pad. Temperature compensation prevents zero shift or sensitivity changes. Weighing pads, indicator and cables are color coded for easy match up. Include one 3 channel indicator, three colored cables, one 110V battery charger cable, three ramps, and six tire stops. Also includes a case.

Part No.	Capacity	Price
12-16711	2,500 lbs. per pad	.
12-16715	6,000 lbs. per pad	.
12-16721	10,000 lbs. per pad	.
12-16725	15,000 lbs. per pad	.
OPTIONS		
Part No.	Description	Price
12-16730	Extra cable, colored	.
12-16735	Extra ramps, small, set of 3	.
12-16740	Extra ramps, large, set of 3	.
12-16745	Extra tire stops (chocks)	.
12-16750	220V Battery Charger Cable for overseas	.



## TIRE BEAD BREAKER

Once the tire & wheel have been removed from the airplane, the air is let out of the tire. The "Tire Bead Breaker" is used to break the bead or bond between tire and wheel. The "TBB" let you safely break this bead almost without effort & without doing damage to the expensive cast wheels. One broken wheel half can easily cost more than the "Tire Bead Breaker"!

The "Tire Bead Breaker" adjusts to fit tires as small as tailwheel tires and as large as those tires found on large, corporate cabin planes. Can be used on both tube and tubeless tires.

P/N 12-16790 .....



## TIRE BEAD BREAKER

The universal design of this tire bead breaker accommodate tube type and tubeless tires. It is easily adjustable for a wide range of tire sizes up to as large as tires for Twin Beech and Aero Commanders. Features all steel construction. P/N 13-02360 .....

## ACCUGAGE PROFESSIONAL TIRE GAUGE



This very accurate bourdon tube tire gauge offers precision pressure control and a rugged steel case with rubber shock-absorbing cover. It comes complete with a 12" long flexible braided hose, a bleeder valve, and stop hand. It is easy to read the pressure on this 2" gauge with 1" psi markings and 60 lb. range. Excellent for use on aircraft tires as well as cars and trucks.

P/N 13-00437 .....

## TIRE PRESSURE MONITOR SYSTEM



Southern Precision Components Inc. is introducing a Wireless Tire Pressure/Temperature LCD Monitor (TPMS). With the flip of a switch, this battery operated, hand held unit, displays the actual tire pressure and tire temperature.

Small removable electronic valve sensors transmit pressure/temperature to the LCD monitor within 25-50 feet of the aircraft. The sensors can be easily removed when adding air to the tires, and when placing the sensors back on the valve stems, will send the new pressure readings to the LCD monitor. Pressure can be read as PSI, KPA, BAR, or KG/CM squared. Temperature can be read in Centigrade or Fahrenheit. The monitor also has an alarm setting for high or low pressure. The battery has an average life of two years. P/N 05-04367 .....

## AIR ARM TIRE FILLING ADAPTER



This adapter permits the easy air charging of tires inside of most light aircraft wheel pants. The Air Arm will couple to virtually all air dispensing connectors in the aircraft field. The Air Arm can be ordered with or without the gauge adapter head.

P/N 12-30180 .....

## TEMPIL MARKERS



Marks easily on metal, ceramic, glass, plastic, wood and paper. Markings are fast drying, permanent, weatherproof. Won't rub off, run, fade, chip, peel or blister. The surface can be wet, dry, rough, smooth or oily. Efficient on any horizontal, vertical or inclined surface. Long-lasting

6" ball point tube with non-clogging paint.  
Black..... P/N 12-11901..... Red ..... P/N 12-11907 .....

White ..... P/N 12-11908..... Yellow ..... P/N 12-11911 .....

## RUGGLES AIRCRAFT SCALES



Ruggles Scales make it easy and affordable for you to compute weight and balance on your own aircraft any time and any place. They are small and easy to transport. With their drive on capability, there is no need to jack up each wheel to slide scales in place. Ruggles Scales

use the principle of a fulcrum and a very long lever. So simple, the only tool you will need is a screwdriver for calibration. Sturdily constructed of cadmium plated steel and precision engineered for accuracy. Complete instructions are included with scales. Not certified. Capacity is 3600 lbs. (1200 lbs. per wheel). Scale can be set to either 2:1 or 4:1 ratio. Tricycle gear set includes 3 arms and 3 scales. Taildragger set includes 2 arms and 3 scales.

Tricycle gear Ruggles Scales set..... P/N 12-21400.....  
Taildragger Ruggles Scales set ..... P/N 12-21450.....

TO

# AIRCRAFT JACKS - PARTS CARTS

## MEYERS HYDRAULICS AIRCRAFT JACKS



Meyers Hydraulics have been recognized as the industry standard for aircraft jacks for over 25 years. Professional mechanics rely on the AJS Jack Set for applications requiring heavy-duty lifting capacity, smooth maneuverability, and reliability. Refer to the Application Chart below for the components required for your aircraft, and then order from the price list accordingly.

Aircraft	Jacks	Tailstand	Legs	Tubes & Caps
<b>Aero Commander</b>	(2) A-6	(1) ATS	(2) AJL	(2) AT-4
<b>Beech:</b> Model 50, King Air, Queen Air	(2) A-6 (1) A-5	---	---	---
<b>Beech:</b> Bonanza, Debonair, Travelaire, Baron	(2) A-5	(1) ATS	---	---
<b>Mooney</b>	(2) A-5	(1) ATS	---	---
<b>Piper:</b> All except Navajo & Aerostar	(2) A-5	(1) ATS	---	---
<b>Piper Navajo &amp; Aerostar</b>	(2) A-6	(1) ATS	---	---
<b>Cessna:</b> Cardinal RG	(2) A-6	(1) ATS	---	(2) AT-4 (2) ATC-8
<b>Cessna:</b> All high wings RGs except Cardinal	(2) A-6	(1) ATS	(2) AJL	(2) AT-4 (2) ATC-8
<b>Cessna:</b> All 300 & 400 Series	(2) A-5	---	---	(2) AT-28 (3) ATC-4
<b>Navion</b>	(2) A-5	(1) ATS	---	(2) AT-28

Part No.	Description	Price	AJS	Height Ranges
12-21405	A-5 Jack	.	A-5 w/AT-1*	22"/36"
12-21410	A-6 Jack	.	A-5 w/AT-28	28"/42"
12-21415	ATS Tail Stand	.	A-5 w/AT-3	34"/58"
12-21435	AJL Leg	.	A-6 w/AT-2*	34"/58"
12-21440	AT-1 Tube	.	A-6 w/AT-4	54"/78"
12-21445	AT-2 Tube	.	A-6 w/AJL	Legs+10"
12-21455	AT-3 Tube	.	ATC-4 Cap	+1 to 4"
12-21460	AT-4 Tube	.	ATC-8 Cap	+1 tp 8"
12-21465	AT-28 Tube	.	ATS Tailstand	30"/51"
12-21470	ATC-4 Cap	.		
12-21475	ATC-8 Cap	.		

(\*) ATC Caps will not work on these tubes.

### AJS UNIVERSAL AIRCRAFT JACK SET

The AJS Universal Aircraft Jack Set from Meyer Hydraulics has served as the general aviation industry standard for over 25 years. Professional mechanics rely on the AJS Jack Set for applications requiring heavy duty lifting capacity, smooth maneuverability, and unquestioned reliability. The AJS Set lifts all retractable gear aircraft weighing up to 8000 lbs.

#### AJS System:

- |  |                 |
|--|-----------------|
| 1. A-5 Jack w/ AT-3 Tube               | 6. AT-3 tube    |
| 2. A-5 Jack w/ AT-1 Tube               | 7. AT-1 tube    |
| 3. ATS Tallstand                       | 8. AT-4 caps    |
| 4. A-6 Jack w/ AT-2 Tube               | 9. AT-2 tube    |
| 5. A-6 Jack w/ AT-4 Tube & AJL Leg Set | 10. AT-4 tube   |
|  | 11. AJL Leg Set |

P/N 12-21476 .....

### AJS2 DELUXE JACK SET

Includes one complete AJS Jack system (describes above) plus one A-5 Jack with AT-1 tube, one AT-28 tube, and one ATC-4 cap. A very popular Jack system for general aviation maintenance.

P/N 12-01378 .....

## JACK PADS

Jack pads provide a cradle for the main landing gear legs. The cradle design securely holds the landing gear providing a safe jack point. The adjustable jack pad fits flat spring gear. The round gear jack pad fits the models listed below. • Save time when servicing tires, wheel bearings and brakes • Lift only the wheel instead of the whole aircraft • Eliminate the unsafe practice of stacking wood blocks under a bottle jack • All parts pack away neatly into a sturdy weather resistant toolbox • Made in USA



**FLAT PIVOT POINT ADJUSTABLE JACK PAD** - \* Adjust width, taper and angle adjustment. \* Adapts to many jacks. Shown with bottle jack. \* Fits: Cessna C-120, 140, 150, 170, 172, 175, 180, 185, 182, 188, 190, 195, 205, 206, 336, 337, flat gear 177RG, Piper Tomahawk, Beech Skipper, Champion, Bellanca, and similar spring steel landing gear. P/N 12-00837 .....



**ROUND JACK PAD ADJ-R** - Jack pads provide a cradle for the main landing gear legs. The ADJ-R has a half round design cradles the landing gear safely. Pivots on a machined bottle jack extension. Use with Cessna C-172RG, 177RG, 182RG, 210, T210, P210, and similar landing gear P/N 12-00679 .....



**C300 JACK PAD ADJ-300** - \* Cessna 300, 400 & 500 series \* Perfect for the Conquest & Citation. \* Sold in Singles. P/N 12-00683 .....

## JACK EXTENSIONS



\* Bottle Jack Extensions will fit any 1-1/4" O.D. ram. \* Typical 6 ton jack has a 1-1/4" O.D. ram. \* Extensions are machined & slide together for easy stacking. \* Use on aircraft with a jack point pin. \* Not the same extensions as found in the Aero Jack Kit below. \* No special jack pad needed on tubular C-152, 172, 182 etc.  
1.5" extension .....P/N 12-00156 .....

3" extension .....P/N 12-00157 .....

8" extension .....P/N 12-00158 .....

## INNOVATIVE PARTS CARTS

Keep parts and pieces from taking off. Cut clutter and down time. .... Everyone needs one or more - at work or at home, innovative parts carts people become very attached to their parts carts. They're virtually indestructible. Make users more efficient, productive and better organized - plus they're good looking and customizable.



**INNOVATIVE PARTS CART A™** - \* Industry's easiest-nesting/catalog. \* Perfect size for "lighter-hit" jobs. \* Makes a great portable workstation. \* High-carbon, heat-treated steel shelf brackets for years of trouble-free use. \* All shelves have upper side rails to prevent parts slide-off. \* Four industrial grade total-lock caster wheels for mobility; zero movement when locked. \* Durable powder coat finish stays new-looking longer. \* Shown with optional Shelf Mat. \* U.S. Patent #7,314,413 \* Other Patent Pending. \* 42"W x 31"D x 44"H \* Shelves measure 40"W x 24"D \* Shelves adjust every 3" \* Weight rated to 125 lbs. per shelf \* Includes: \* 2 adjustable shelves \* 2 adjustable support arms \* 2 bungee cords \* 6 metal hooks \* 73 lbs. PN 12-02023 .....



**INNOVATIVE PARTS CART B™** - \* Industry's easiest-nesting/catalog \* 30% more shelf positions than any other parts cart/catalog. \* High-carbon, heat-treated steel shelf brackets for years of trouble-free use. \* All shelves have upper side rails to prevent parts slide-off \* Four industrial grade total-lock caster wheels for mobility; zero movement when locked. \* Durable powder coat finish stays new-looking longer. \* Assembles in less than 20 minutes. \* U.S. Patent #7,314,413 \* Other Patent Pending. \* 42"W x 31"D x 75"H \* Shelves measure 40"W x 24"D \* Shelves adjust every 3" \* Weight rated to 125 lbs. per shelf \* Includes: o 3 adjustable shelves o 2 adjustable support arms o 2 bungee cords o 6 metal hooks \* 92 lbs. PN 12-02024 .....



**INNOVATIVE PARTS CART C™** - \* Easiest shelves in the industry to adjust. \* Provides 32 sq. ft. of shelf space! \* High-carbon, heat-treated shelf brackets for years of trouble-free use. \* All shelves have upper side rails to prevent parts slide-off. \* Durable powder coat finish stays new-looking longer. \* Shown with optional RO Holder. \* U.S. Patent #7,314,413 \* Other Patent Pending. \* 42"W x 50"D x 75"H \* Shelves measure 40"W x 24"D \* Shelves adjust every 3" \* Weight rated to 125 lbs. per shelf \* Includes: o 6 adjustable shelves o 4 adjustable support arms o 2 bungee cords o 6 metal hooks \* 152 lbs. PN 12-02025 .....

# AIRCRAFT JACKS

## AIRCRAFT JACKS

Constructed of welded square steel tubing. The three leg design clears close tolerance gear doors, such as Bonanzas and Barons. All models have machine jack point centering cap with casters, jack handle holder and positive locking jack point centering cap with casters, jack handle holder and positive locking collars. Oversize shipping charges apply.

Aircraft Jacks	Image	Part No.	Price
Piper and Mooney Jack and other light twins and singles Height 26"-45". Cylinder Capacity **6,000 lbs. <b>Note: Mooneys require 26" clearance plus room for the cap or the Jack will not fit.</b>		12-99115	.
Cessna 300 & 400 Jack Series. Same as the J-105 except height 27"-52". Cylinder capacity **16,000 lbs.		12-99120	.
Tail Stand 18"-35:		12-99130	.

## JACK POINTS

Aircraft Jacks	Image	Part No.	Price
<b>Adjustable Jack Points</b> Fits Cessna 150, 172, 182, 188, Citabrias, Bellancas, & Grumman. Slide bar adjusts easily to a number of widths and infinite angles on aircraft with flex spring steel main gear legs, which allows use of one pad for several applications. Compatible with most jacks, including bottle and floor jacks. All steel construction and powder coated finish to resist scratches.		12-01373	.
Cessna Jack Points Spring Gear Type		12-01374	.
Mooney Jack Points (Sold Individually)		12-01375	each

## JACK LIFT PAD



This Jack Lift Pad is quality made of alloy steel and is adaptable to all bottle type hydraulic jacks. The serrated vee design provides positive holding. It is easy to install and proves a great variety of applications.  
P/N 12-30270 .....

## REDLINE DOLLY-JACK



The Dolly-Jack is a self contained, portable system that can lift any main wheel or nose wheel with the turn of crank for routine maintenance and tire changes. It allows the plane to spin around in its own space. Made in the USA using 4130 Chromoly material.

**FITS THESE PIPER:** Arrow, Lance, Saratoga (RG), Malibu, Matrix, Meridian, Seminole.

**FITS THESE BEECHCRAFT** Bonanza, Baron, Travel Air, T-34  
P/N 13-03380 .....

## AERO JACK KIT



The Aero Jack System saves time when changing tires or working on landing gear. Use a combination of innovative tools packed in a handy toolbox. Designed by an A&P, for do-it-yourselfers and other mechanics, three kits are available depending on your needs.

Description	Part No.	Price
<b>Complete Aero Jack System</b> - Service both flat and round gear from a handy toolbox.	12-00254	.
<b>Flat Gear Aero Jack Kit</b> - Cessna C-120, 140, 150, 170, 172, 175, 188, 182, 190, 195, 205, 206, 336, 337, flat gear 177RG, Piper Tomahawk, Beech Skipper, Champion, Bellanca, and similar landing gear.	12-00681	.
<b>Round Gear Aero Jack Kit</b> - Cessna C-172RG, 177RG, 182RG, 210, T210, P210, and similar landing gear.	12-00682	.
<b>Expandable Aero Jack System</b> - Included in the tool box is: Bogert Tribal Jack with all the jack pads. (C210, RG, R, FPP, Moon, Musk, C300). Weight is 30 lbs.	12-02096	.

## BOGERT TRIBAL JACK



Forget expensive wing jacks for simple projects! Reach for Bogerts 6-ton Tribal Aircraft Jack! Raise each wheel independently in seconds. Service brakes or bearings, and change a tire in seconds. Adjustable lifting height, with a range of 3.5" to 11.5". Originally designed for Pipers, thus the name "Tribal Jack", it is also used on King Air, Muskateers, Debonairs, Sundowners, Mooneys and most with near vertical landing gear. Max. load is 2500 pounds.  
P/N 12-00838 .....

## BOGERT LIL LIFTERS



### LITTLE LIFTER

- \* Lightweight, 8.5 lbs
- \* Lift Range 2.75" to 9.5"
- \* 4 pivoting pads included
- \* Use with 800X6 tires or smaller



### LITTLE LIFTER II

- \* Lightweight, 10 lbs
- \* Lift Range 2.75" to 13.5"
- \* 4 pivoting pads included
- \* Us with 800X6 tires or larger
- \* Picture shown with 2 liter bottle



### LITTLE LIFTER III

- \* Lightweight, 13 lbs
- \* Lift Range 2.75" to 19.25"
- \* 4 pivoting pads included
- \* Use with 31" tires

Description	Part Number	Price
Bogert 30M-LL MAX 8" LIFT	12-00839	.
Bogert 30M-LL2 MAX 13" LIFT	11-06948	.
Bogert 30M-LL3 MAX 31" LIFT	11-06949	.

## RV JACK STAND KIT



Someday you'll need to jack up your aircraft to install new tires, clean & grease wheel bearings, or fix a flat. This nifty jack stand is safer than using an engine hoist or the wing tie down location.

Requires a modification to the axle nuts (about 1 hour). Kit includes the axle jack arm, axle nut modification hardware, & directions to modify the nuts. For hollow axles (Wittman style) Gear only. Uses automotive bottle jack. Jack not included. Not for RV-8s. For RV Gear Legs with Hole in Axle.  
P/N 12-00634 .....

## PROP SLING, (BOGI-LIFT)



- The tool every mechanic needs!
- \* Lift nose wheel without jacking up whole plane.
  - \* Service nose wheel & strut effortlessly.
  - \* Support a new propeller during installation.
  - \* Use with 2 and 3 blade props.
  - \* 4-point stability with tail & wing jacks.

P/N 12-16718 .....

TO

# AIRCRAFT JACKS

## THREE TON HYDRAULIC AIRCRAFT JACKS



**MODEL #324 3 TON LOW WING JACK** - Eliminates the frustration of having unstable jacks that conflict with landing gear components and gear doors adjacent to your jack point. These jacks are especially appreciated by owners of Bonanza, Mooney, Comanche, & Twin Comanche Aircraft for the manner in which they may be positioned clear of the inner gear door hinge. Model #324 provides an easy slide under fit on aircraft with lower jack points. • **DOUBLE ACTION 3 TON (6,000lbs) HYDRAULIC CYLINDER** • **JACK POINT CENTERING CAP** • **LOCKING SAFETY COLLAR SECURES THE LOAD** • **RUGGED HEAVY GAUGE STEEL CONSTRUCTION** • **STABLE THREE LEG DESIGN CLEARS GEAR DOORS** • **CONVENIENT HANDLE STORAGE** Effective Range: 24"-40" Ram Capacity: 6000lbs P/N 12-01724.....



**MODEL #326 3 TON LOW WING JACK** - 26" - 43" Eliminates the frustration of having unstable jacks that conflict with landing gear components and gear doors adjacent to your jack point. Owners of Beechcraft Bonanza 33/35/36 aircraft especially appreciate these jacks for the manner in which they may be positioned clear of the inner gear door hinge. If the only plane you'll be lifting is the Bonanza... please see Model #324. • **JACK POINT CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE**

**JACK** • **DOUBLE ACTION 3 TON (6,000 lb) HYDRAULIC CYLINDER** • **LOCKING SAFETY COLLAR SECURES THE LOAD** • **RUGGED HEAVY GAUGE STEEL CONSTRUCTION** • **THREE LEG DESIGN CLEARS GEAR DOORS** • **CONVENIENT HANDLE STORAGE** Effective Range: 26"-43" Ram Capacity: 6000lbs P/N 13-05544.....



**MODEL #332 3 TON LOW WING JACK** - 26" - 43" & 32" - 49" Especially suited for use on Cessna 310/320 Aircraft. Supplied with a removable 6" riser to accommodate the higher jack points found on some aircrafts. Similar in design to Model #326, this unique design allows the Model #332 to be easily converted for use as a Model #326 by removing the 6" riser. Owners report this versatility to be of great benefit when aircraft of various types are housed together or the jacks are loaned out to others. • **DOUBLE ACTION 3 TON (6,000 lb) HYDRAULIC CYLINDER** • **JACK POINT**

**CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE JACK** • **6" RISER PROVIDED TO ACCOMMODATE HIGHER JACK POINTS** • **EFFECTIVE RANGE 26"-43" & 32"-49"** • **LOCKING SAFETY COLLAR SECURES THE LOAD** • **RUGGED HEAVY GAUGE STEEL CONSTRUCTION** • **THREE LEG DESIGN CLEARS GEAR DOORS** • **CONVENIENT HANDLE STORAGE** Effective Range: 26"-43" & 32" - 49" Ram Capacity: 6000lbs P/N 12-01725.....

## THE ULTIMATE WHEEL LIFT FOR RV AIRCRAFT



- Mounts in back of the wheel on the axle
- Requires no hoist or bottle jack.
- No blocking required after wheel is removed - completely free standing.
- Wheel will come off and go back on with no changes or other equipment.

- Wheel is raised with rotation of hand crank - positive movement with full control.
- Total weight 4 lbs.
- Lays flat for storage in aircraft compartment.
- Will fit either right or left main wheels.

**Note - will not fit on RV8 flat axles**

P/N 12-01751.....

## EIGHT TON HYDRAULIC AIRCRAFT JACKS



**MODEL #838W 8 TON UNIVERSAL JACK** - 26"-43", 32"-49", 38"-55" When the need is for a versatile jack that can accommodate the needs of a busy FBO, the Model #838W is the choice. Model #838W provides all the strength and versatility needed to accommodate larger aircraft. This unique design allows the Model #838W to easily convert from a 26" low wing jack to a 32" or 38" jack, avoiding the high cost of having to purchase model specific jacks. Now with "Tilt & Go" wheels and convenient handle storage for greater value • **DOUBLE ACTION 8 TON (16,000LB) HYDRAULIC CYLINDER** • **HIGHLY VERSATILE- SHIPPED WITH ADAPTER FOR 26" 32" & 38" HEIGHTS** • **JACK POINT CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE JACK** • **LOCKING SAFETY COLLAR SECURES THE LOAD** • **STABRUGGED HEAVY GAUGE STEEL CONSTRUCTION** • **THREE LEG DESIGN CLEARS GEAR DOORS** • **"TILT & GO WHEELS FOR GREATER MOBILITY** • **CONVENIENT HANDLE STORAGE** Height Range 26"-43", 32"-49" & 38"-55" Ram Capacity: 16,000 lbs. P/N 12-01726.....



**MODEL #868W 8 TON UNIVERSAL JACK** - The ULTIMATE in versatile heavy duty general aviation jacks. When the need is for a versatile jack that can accommodate the needs of a busy FBO, the Model #868W is the choice. The Model #868W combines all the strength and versatility of Model #838W with the necessary fittings to accommodate High Wing Cessna Aircraft such as 172RG, 177RG, 182RG, 210 and 337. Shipped with adapters, our unique design allows the Model #868W to easily convert from a 26" low wing jack through the 32" and 38" levels to a 68" high wing jack, avoiding the high cost of having to purchase model specific jacks. • **DOUBLE ACTION 8 TON(16,000 LBS.) HYDRAULIC CYLINDER** • **HIGHLY VERSATILE- SHIPPED WITH ADAPTERS FOR 26", 32", 38", & 68" HEIGHTS** • **DOUBLE BRACED AT THE 68" HEIGHT FOR STABILITY** • **JACK POINT CENTERING CAP TO ASSURE THE AIRCRAFT STAYS ON THE JACK** • **LOCKING SAFETY COLLAR SECURES THE LOAD** • **RUGGED HEAVY GAUGE STEEL CONSTRUCTION** • **STABLE THREE LEG DESIGN CLEARS GEAR DOORS** • **TILT & GO WHEELS FOR GREATER MOBILITY** • **CONVENIENT HANDLE STORAGE** Height Range: 26"-43", 32"-49", 38"-55", 68"-87" Ram Capacity: 16,000 lbs P/N 12-01727.....

**MODEL #375 TAILWEIGHT/POST** - A tailweight that doubles as a tail post and can be moved easily about the shop. This unique design allows the secure anchoring of Compression or Torsion Loads without the need of numerous sand bags and anchor chains. The #375 Tailweight/Post is a safer and much more professional approach to securing the tail of an aircraft undergoing maintenance. Shipped knocked down, the Model #375 is easily assembled and weighted using Six (6) - 60 lb bag of Quickcrete - obtained locally. • **SINGLE UNIT PROVIDES THE TAILPOST AND TAILWEIGHT FUNCTIONS** • **NO MORE SANDBAGS** • **TELESCOPING SQUARE TUBE POST PINS IN 3" INCREMENTS** • **RUGGED SWIVEL CASTERS** • **CORROSION RESISTANT GALVANIZED WEIGHT BOX** • **SHIPS AT 32 lbs. - FINISHED WEIGHT 375 lbs.** Range of Adjustment: 17½" - 39½" P/N 12-01728.....

## ACCESSORIES

### MODEL #324, 326, 332 WHEEL KIT.

We call them "Tilt and Go" because they do not touch the ground until you tilt back. P/N 12-02032.....

### TAILWEIGHT EXTENSION.

Adds 13" to the post for higher wing aircraft like the bigger Cessna's P/N 12-02033.....

TO

# SAFETY EQUIPMENT

## HOBBYAIR RESPIRATOR



The Hobbyair Pro 1 is a fresh air breathing system specifically designed for the amateur painter which allows only fresh air to reach the user's lungs. It features a comfortable, lightweight face-mask with beltline hook, simple snap together fittings, and is very affordable. Includes the pump unit with two stage, single speed, air bypass type motor, mask, belt and 40 foot delivery hose, fittings, filter, cord and case. The Buddy System Hobbyair is designed for two people and includes two 40 ft. delivery hoses. 1 yr warranty. Excellent for use in homebuilt aircraft construction and painting.

Hobbyair Pro 1 (1/2 mask) 110V .....P/N 12-15850 .....  
 Hobbyair Pro 1 (1/2 mask) 220V .....P/N 12-15860 .....  
 Buddy System Hobbyair (110V).....P/N 12-15870 .....  
 Hobbyair Pro (Full mask) .....P/N 12-15851 .....  
 Hobbyair II.....P/N 09-00633 .....

## CITATION 4 HVLP SPRAYER/RESPIRATOR



Similar to, but much more powerful than their standard CITATION unit, this new sprayer will allow its' user to achieve 'show plane' quality results to a level never before possible with a turbine powered system. Do you have HVLP finish quality reservations? You can forget about them with this new system! The CITATION '4' offers a much higher PSI range without sacrificing the benefits of HVLP such as lower overspray, the elimination of moisture and high transfer efficiency. This is all accomplished with a more powerful, yet quieter and cooler running turbine blower. Like the standard CITATION, this new system, of course, offers the additional benefit of a built-in supplied-air respirator to assure breathing protection for its' user.

P/N 12-00973 .....

## PAINT SPRAY RESPIRATOR



Chemical-cartridge respirator for protection against organic vapors, paint, lacquer and enamel mist and dusts. Replaceable pre-filters and chemical cartridges. Approved by U.S. Bureau of Mines and the National Institute for Occupational Safety & Health (MESA/NIOSH Approval No. TC-95).

#95110, Respirator .... P/N 12-15700 .....  
 #95111, Replacement Cartridges Set of Two  
 P/N 9511 .....

#95112, Replacement Pre-Filters Set of Two  
 P/N 95112.....

#R185B, Clips for Pre-Filters Pkg. of 2 ..... P/N 12-01197 .....

## 3M™ PARTICULATE RESPIRATORS



P/N 09-01496



P/N 09-01497

Helps provide worker protection against certain non-oil based particles. Comfortable, easy to use, and promotes greater worker acceptance increasing wear time. Features 3M's patented filter media, nose foam, and adjustable noseclip that helps provide a secure seal and helps reduce eyewear fogging. Workplace applications: woodworking, grinding, sanding, sweeping, bagging, other dusty operations.

Description	Part No.	Price
Standard dust mask	09-01496	.
Vented dust mask	09-01497	.

## 3M™ PROFESSIONAL SERIES RESPIRATOR ASSEMBLY



3M recommended for exposures to organic vapors and mists commonly associated with spray painting, lawn and garden pesticides, staining or refinishing decks and many other workplace/occupational applications.

Small ..... P/N 09-01489.....  
 Medium ..... P/N 09-01490.....  
 Large ..... P/N 09-01491.....

## 3M™ PROTECTIVE EYEWEAR



**1730 SERIES** - Meets the requirements of ANSI Z87.1-2003 as high impact protectors.  
 Black and Clear..... P/N 09-01488.....



**1740 SERIES** - Meets the requirements of ANSI Z87.1-2003 as high impact protectors.

Black and Clear..... P/N 09-01725.....



**1752 SERIES** - Stylish safety eyewear with a contemporary appearance. Lightweight. Comfortable fit afforded by gel-like nose piece and soft temples. Polycarbonate lens offers 99% UV protection, and has anti-scratch coating. Meets ANSI Z87.1-2003 as high impact protectors.

Blue and Clear..... P/N 09-01726.....



### PROFESSIONAL SAFETY GLASSES -

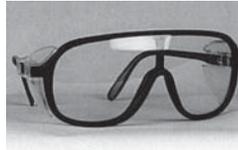
- For the professional or serious do-it-yourselfer
- Ideal for outdoor use (PN 13-90751)

Clear and Black ..... P/N 13-90750.....

Tinted grey and Black ..... P/N 13-90751.....

**FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352**

## SAFETY SPECTACLES



These safety spectacles feature a contoured shape which offers unobstructed vision, excellent side protection and comfort fit bridge. Front color and temple color is black. Lens and sideshield color is clear

P/N 13-01310 ...../ea.

## IMPACT GOGGLES



Protects eyes from flying objects. Can be worn over personal glasses. Perforated mask reduces fogging. Fully adjustable elastic headband. Clear polycarbonate lens, 050" thick, is easily removed for cleaning. Meets requirements of ANSI Z87.1 Goggles ..... P/N 91200.....  
 Replacement Lens, Clear. P/N 91202.....

## FULL-SEAL PROTECTIVE GOGGLES



These goggles completely shield the face from chemical splash, flying particles and dust. They are ideal for use with epoxies and paints and are included in our Safe-T-Plus Kits. Self-ventilating for comfortable wear. P/N 11-00317 ...../ea.

## SAFETY FACE SHIELDS



Provides protection for the face and neck against chemical splash and flying particles. Window 9" x 14". Unit adjusts easily to sizes 6 - 8-1/4. P/N 90029 .....  
 Replace. Window, Clear  
 P/N 90030.....

## SCARAB SAND BLAST HOODS



Features durable construction and large size to cover the head, face, neck and shoulders to protect against the impact of high velocity abrasives. Made with super-heavy 10.38 oz. army duck canvas treated with high water repellent and mildew resistance. Complete with an ERB Safety built-in construction type hard hat that meets ANSI Z89.1-2003 (Type 1, Class E, G & C) and complies with OSHA regulations for industrial head protection.

Scarab Sand Blast Hood.....P/N 12-01665 .....  
 Scarab Lite Sand Blast Hood..P/N 12-01666 .....

### ACCESSORIES

Lens for Scarab Blast Hood ..... P/N 12-01667 .....  
 Screen for Scarab Blast Hood.....P/N 12-01668 .....

TO

# SAFETY EQUIPMENT

## 3M™ AOSAFETY GOGGLES



### AOSAFETY GOGGLE BX

- \* Adjustable soft tip temples feel good even after extended wear
- \* Soft universal-fit nose bridge
- \* High impact polycarbonate lens blocks 99.9% UV
- \* Three lens angles for custom fit
- \* Available in Clear or Gray +1.50, +2.0 & +2.50 diopter lenses

### AOSAFETY GOGGLE VIRTUA SPORT

- \* Meets ANSI Z87.1
- \* Sleek - Styling with both men and women
- \* Lightweight - Less than 1 oz
- \* Contoured flexible temples for comfortable fit
- \* Hard Coat guards against scratching, static and chemical attack



### AOSAFETY DUST GOGGLEGEAR

- \* Vent channels at top and bottom for improved air flow
- \* Lighter weight than most goggles for improved comfort
- \* Soft foam backing seals out particulates
- \* Meets the Impact Goggles requirements of ANSI Z87.1
- \* Made in U.S.A.



### AOSAFETY GOGGLE OC CHOPPER

- \* Extreme safety eyewear for indoor use
- \* OCC styling
- \* Clear anti-fog lens
- \* Complies to ANSI Z87.1 high impact standards



### AOSAFETY LIGHTVISION 2 GOGGLE

- \* Hands free direct lighting; anti-fog lens; available w/reader lens
- \* Two ultra bright, adjustable LED lights
- \* Long-life, replaceable CR2032 3V battery; includes bag and lanyard
- \* Flexible nose bridge fits virtually all faces
- \* Meets ANSI Z87.1-2003 and CSA Z94.3 standards



FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

## PELTOR WORKTUNES



Worktunes is a self-contained AM/FM noise attenuating headset (NRR 25db) which provides hearing protection combined with an AM/FM radio. Features include a wide, soft padded headband, flexible antenna

P/N 11-01589.....

## PELTOR WORKTUNES

Safe listening at their fingertips. Just push the button on the PTL muff and speech and sounds "outside" the muff cup can be heard clearly and safely. After 30 seconds, the muff automatically returns to its full protection with a NRR of up to 26 dB. Over-the-head Ear Muff... P/N 12-00895 .....  
Cap Attached Ear Muff.... P/N 12-00896 .....  
Hygiene Kit..... P/N 12-00897 .....



## NOISEBUSTER ANR EARMUFFS



Designed to reduce aircraft engine noise for airport ground support crews as well as aircraft maintenance and technical personnel, the NoiseBuster Active Noise Reduction (ANR) Safety Earmuff combines an ANSI-rated 26NRR passive earmuff with active noise reduction electronics that deliver up to an additional 20 db of low-frequency noise attenuation. Powered by a AA battery, the earmuff is resistant to water, moisture, contaminants, mechanical shock, and vibration.

Perfect for users who do not require two-way communications capability but who can benefit from protection. Includes: \* NoiseBuster ANR Safety Earmuff \* One AA battery \* 3.5 mm audio interface cable \* Warranty - 6 months  
P/N 11-07369.....

## HEARING PROTECTOR



This 3-position ear muff offers protection from high noise levels. Lightweight comfort, effective design combine to provide high performance attenuation. Can be worn over or behind head, under chin.

P/N 97030.....

## PELTOR PERSONAL HEARING PROTECTOR



Peltor Personal Hearing Protectors Provide maximum attenuation in severe noise environments such as jet engines, riveting, and industrial high noise areas. Features include soft, broad ear cushions and softly padded head band. Combined liquid and foam filled ear seals give good sealing and low surface pressure.

P/N 12-16110.....

## DAVID CLARK DELUXE HEARING PROTECTOR



The David Clark Deluxe Model Hearing Protector provides maximum noise attenuation and optimum comfort. Features urethane covered ear seals, soft foam cushioned headband, military quality materials, finish and workmanship.

P/N11-09205.....

## CABOT HEARING PROTECTORS



The Cabot hearing protectors are lightweight and comfortable, allows commands to be heard, liquid/foam ear cushions, and padded, adjustable headband.

P/N 12-01172.....

## E-A-R NOISE FILTERS

### E-A-R CLASSIC



- \* Most popular earplug in the world
- \* NRR 29dB
- \* The E-A-R® Yellow color is your assurance of proven protection
- \* Moisture resistant dermatologically safe foam is not irritating
- \* Slow recovery PVC foam provides comfort with low pressure

P/N 9134.....  
P/N 09-02148 w/ Cord.....

### CLASSIC™ PLUS



- \* Classic Plus are longer than Classic earplugs to fit deeper into the ear canal and provide a higher level of protection.
- \* Slow-recovery foam helps ensure comfort and minimize pressure.
- \* Bright yellow color provides a quick visual compliance check.
- \* Dermatologically safe foam is non-irritating, non flammable, and moisture-resistant.

P/N 09-02149.....  
P/N 09-02150 w/ Cord.....

### E-A-R SOFT™ YELLOW NEONS™



- \* NRR 33dB-Highest NRR available
- \* THE WORLD'S SOFTEST EARPLUGS
- \* Self-adjusting foam provides low pressure with excellent attenuation
- \* Exciting designs and brilliant colors
- \* Dermatologically safe foam is non-irritating to the skin

P/N 09-02151.....  
P/N 09-02152 w/ Cord.....

## E-A-R EARBUDS 2600 HEADPHONES



- \* NRR 26dB
- \* Noise Limited to 82dB
- \* Convenient, Easy-Access Volume Control
- \* Mp3 Compatible
- \* Blocks out External Noise
- \* Hear Your music while you work
- \* Ultra Comfortable Design
- \* Better fit for longer wear

P/N 09-02153.....

TO

# DRAEGER X-PLORE TWIN FILTER RESPIRATORS

## X-PLORE 3300 SERIES RESPIRATORS



The 3300 Series Mask is an economical half mask made of TPE material with a continuous grey color neck strap.

Under the new particulate filter rules, there are three series of filters: N, R, and P. The N filters are Not resistant to oil; the R filters are resistant to oil; and the P filters are oil proof.

The N series of filters is appropriate for airborne particles such as silica or lead, when there are no oil-based products also in the air.

For example, an N series filter would be recommended during the removal

of old lead paint. However, for spraying an oil-based lead paint, an R or P series filter would be recommended as protection against the airborne mist of oil-based solvent.

The R series (resistant to oil) should only be used for a single shift when solvent or oil mist is present in the air. This filter resists oil but may break down in contact with oil or solvent over a long time.

When using P series filters, check the manufacturer's instructions to determine how long the filter can be used when airborne particles are present. NIOSH originally thought that P series filters were oil-proof but recent tests have found there may be some breakdown of the filter material with long-term oil exposure.

Note: N, R, and P filters do not provide protection against organic vapors.

### 3300/N95 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each N95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02261 .....

### 3300/R95 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each R95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02262 .....

### 3300/P100 RESPIRATOR KIT

Kit includes 3300 Mask, 2 each P100 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02263 .....

## X-PLORE 3500 SERIES RESPIRATORS



The 3500 Series Mask is a premium half mask made of Draeger Flex Material. Clasped Slide-Down feature with a black neck strap.

Under the new particulate filter rules, there are three series of filters: N, R, and P. The N filters are Not resistant to oil; the R filters are resistant to oil; and the P filters are oil proof.

The N series of filters is appropriate for airborne particles such as silica or lead, when there are no oil-based products also in the air.

For example, an N series filter would be recommended during the removal

of old lead paint. However, for spraying an oil-based lead paint, an R or P series filter would be recommended as protection against the airborne mist of oil-based solvent.

The R series (resistant to oil) should only be used for a single shift when solvent or oil mist is present in the air. This filter resists oil but may break down in contact with oil or solvent over a long time.

When using P series filters, check the manufacturer's instructions to determine how long the filter can be used when airborne particles are present. NIOSH originally thought that P series filters were oil-proof but recent tests have found there may be some breakdown of the filter material with long-term oil exposure.

Note: N, R, and P filters do not provide protection against organic vapors.

### 3500/N95 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each N95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02264 .....

### 3500/R95 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each R95 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02265 .....

### 3500/P100 RESPIRATOR KIT

Kit includes 3500 Mask, 2 each P100 filter pads, 2 each filter pad retainers, and 2 each filter pad bases. P/N 12-02266 .....

## X-PLORE 3300 COMBINATION CARTRIDGE KIT



The combo cartridge is a P100 filter, and also filters out organic vapor/acid, gas, formaldehyde, chlorine dioxide, and hydrogen fluoride. Kit includes mask and one combo cartridge. P/N 12-02267 .....

## X-PLORE 3500 COMBINATION CARTRIDGE KIT



The combo cartridge is a P100 filter, and also filters out organic vapor/acid, gas, formaldehyde, chlorine dioxide, and hydrogen fluoride. Kit includes mask and one combo cartridge. P/N 12-02268 .....

## REPLACEMENT PARTS FOR 3300/3500 KITS

Description	Part No.	Price
3300 Series Mask Only	12-02253	.
3500 Series Mask Only	12-02254	.
N95 Filter Pad Only	12-02255	.
R95 Filter Pad Only	12-02256	.
P100 Filter Pad Only	12-02257	.
Filter Pad Retainer	12-02258	.
Filter Pad Base	12-02259	.
P100 Combination Cartridge	12-02260	.

TO