ATS E50A MAGNETO SYCHRONIZER The ATS E50A Magneto Synchronizer



is a modern redesign of the classic test instrument used by aviation mechanics around the world for over 50 years. It uses surface-mounted (SMD) micro-circuitry to eliminate the need for the bulky vibrator, and but technology of the E50A uses levi voltage.

heavy transformers. The new technology of the E50A uses low voltage signals to measure the inductance of the magneto and precisely detect the moment the points break, without any false readings.

The ATS E50A also features enhancements to make your job easier, such as a Built-In Calibrated Test Point to validate your tester before each use; a battery monitor to give you plenty of warning before your tester runs out of power; and Quiet-Mode operation that alerts you only when the points break - so no more annoying "buzz-box" always screaming at you when you're trying to do a testP/N 12-01013

AIRCRAFT TIMING INDICATOR MODEL E25 The Aircraft Timing Indicator Model E25 is a unique



device that locates the relative relationships between the crankshaft, magneto point openings, camshaft and valve timing. Easily attached to the propeller spinner with mounting bands that are included with the unit, the E25 quickly and accurately (within 1/2 degree!) locates top dead center. The result: the all-aluminum

Model E25 speeds up and improves the process of timing magnetos to the engine. With its easy-to-read dial and 18mm, hardened aluminum piston stop, the E25 is a snap to use. Note: Piston Stop is included.

E25 Timing IndicatorP/N 12-01014 Replacement Piston Stop......P/N 12-18100

MAGNETO TIMING LIGHT



Measures 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. 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/TweeterP/N 12-16901 Single Magneto Timing Light w/TweeterP/N 12-16903



PROPELLER BLADE MOUNTED **MAGNETO TIMING DEVICE**

The propeller blade mounted timing device is a selfcontained unit that incorporates the blade mount, digital inclinometer, and adjustable cinch strap. More accurate, quicker, and easier to use than competitive

products. The blade slots are graduated and spaced so as to allow installation on many different blade model designs.

P/N 12-04969



WINDOW INSPECTION PRISM KIT

This tool kit provides a proven method to inspect for cracks on the hidden edges and bolt holes of aircraft windows. Kit contains the prism, hard-coated with AWR 8000, 1 oz. bottle of coupling fluid, flashlight and an instruction guide, all in a durable carrying case. P/N 09-05588

ENGINE TEST KIT



EK5EM - The Engine Test Kit EK5EM has all of the test equipment needed to check engine compression, synchronize magnetos, time aircraft engines, and test ignition leads all in one tool box. The kit contains: the 2EM Differential Pressure Tester with master Orifice, LED52 Electronic

Magneto Synchronizer, Eastern E25 Aircraft Timing Indicator, Eastern E5 High Voltage Cable Tester, the Compression Tester Extension & Hip Roof Tool Box......P/N 12-02449

EK5 - ATS Engine Test Kit has all of the test equipment needed to check engine compression, synchronize magnetos, time aircraft engines, and test ignition leads all in one tool box. Contains: 2E, LED52, Eastern E25, Eastern E5, & 19000 tool box. Now includes the 18mm-XT Compression Tester Extension......P/N 12-02943

ATS E5A HIGH VOLTAGE CABLE TESTER The Model E5 High Voltage Cable Tester



tests Hi-Voltage aircraft engine ignition cables quickly and accurately. And it's incredibly easy to use: simply connect the three wires, push the test button and check the test window. That's all there is to it. By simulating the magneto's high output voltage, the E5 instantly identifies both good and defective cables. And it operates on either 12 or 24 volts, D.C.

The E5 eliminates guess work, saves valuable time, is equipped with an audio high voltage indicator to ensure safety and is 100% dependable. And no other high quality cable tester is as attractively priced.......P/N 12-01016

DIFFERENTIAL CYLINDER PRESSURE MODEL E2A



Eliminates guesswork by allowing you to locate the exact location and cause of your engine's loss of efficiency. Field tester for 2 years by Teledyne Continental Motors, and approved for use on Teledyne Continental Engines by their Engineering and Field Services Group. Complete instructions and an 18mm adapter with each unit.

"M" models have built-in master orifice * Not approved by TCM. E2A-1000 with 12mm......P/N 15-05209 12 mm Adapter.....P/N 12-01018 14MM Adapter.....P/N TP171

ATS DIFFERENTIAL CYLINDER PRESSURE TESTERS



Comes complete with on-off safety valve to eliminate pressure when disconnecting from the cylinder. Can be used to check intake or exhaust valves, cracked or worn rings, defective cylinders, worn bushings, etc.

Specifications: Orifice size is .040". precision gauges matched to within +/-2%. 18MM plug adapter. 24" pressure hose. Includes hose and spark plug adapter. Factory calibrated. Letter of certification available upon

GREATER THAN 5" BORE

Specifications: Orifice size is .060". precision gauges matched to within +/-2%. 18MM plug adapter. Includes hose and spark plug adapter. Factory calibrated. Letter of certification available upon request. Note: For an engine cylinder with 5.00 inch bore and over: 0.060 inch orifice diameter, .250 inch long, and a 60 degree approach angle. P/N 12-02345

18MM CYLINDER PLUG

18MM adapter plug used with the ATS 2E and 2EM Differential Pressure Testers. For engines with massive electrode plugs.

P/N 12-05064

DIFFERENTIAL PRESSURE TESTER WITH MASTER ORIFICE



Now you can conveniently check the calibration of your pressure tester before each use without disconnecting the tester. Comes with complete instructions. Includes hose and spark plug adapter.

5" Bore Diameter or smaller.....P/N 12-02346 Bore Diameters greater than 5".....P/N 12-02347

' EQUIPMENT – BORESCOP



ATS TIME-RITE® PRO BASIC KIT -**18MM ENGINES**

The classic tool for timing aircraft engines. Timing is accomplished by means of pivot arm actuated by the piston's motion, a slide pointer, automatically referenced by the pivot arm and an adjustable calibrated scale. 18mm basic unit.

P/N 12-05511



ATS TIME-RITE® PRO COMPLETE **KIT - 18MM ENGINES**

Time-Rite has been the number one choice of aviation mechanics for over 40 years when it comes to precisely timing engines. Time-Rite is an instrument designed for precision timing of

aircraft engines by direct measurement of piston travel. The complete kit includes the basic unit plus the complete set of Arms and Scales required to service 18mm engines.....P/N 12-05512



ATS TIME-RITE® DELUXE COMBO KIT

Deluxe combo kit contains everything needed to handle every engine listed in the timerite manual. Time-Rite is an instrument designed for precision timing of aircraft engines by direct measurement of piston travel. Kit Includes: (1) 18mm Time-Rite unit, (1) 14mm Cone, A complete set ofP/N 12-02872



ATS PRO DIFFERENTIAL PRESSURE TESTER KIT

ATS 2EM Differential Pressure Tester (with Master Orifice) and the Spark Plug Port Extension Tool together, to make your life a whole lot easier.

Note: The ATS 2EM Differential Pressure Tester has

a .040" orifice as required by Teledyne Continental SB03-3 Service Bulletin, and is the proper type of instrument to test ALL Teledyne Continental engines in accordance with the aforementioned bulletin. The ATS 2EM also complies Textron Lycoming SI-1191A Service Instruction and is appropriate for ALL Textron Lycoming engines as indicated in the Service Instruction. P/N 12-03330



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

2mm Extension......P/N 05-06883



ATS COMPRESSION TESTER EXTENSION

A replacement plug adapter with an 8-1/2" reach to work around manifolds, baffiling, harnesses, support structures, and anything else that gets in your way. **Note:** For use with ATS models 2E and 2EM Compression Testers. 1 lbs (0.5Kg) weight. 18MM aviation engine plug threads 8-1/2" long to clear obstacles. Standard. P/N 12-02380



ATS HEAVY DUTY **DIGITAL MULTIMETER**

This rugged multimeter is designed to give reliable, accurate readings under the most extreme conditions. The case is double-injection molded and it also has a removable heavy vinyl casing to guard against impact. Measures voltage, amperage, resistance, continuity, capacitance, temperature, and diode checks. Positive stop rotary switch selects any of over 40 different functions......P/N 12-05093



HAWKEYE® V2 VIDEO **BORESCOPE**

The Hawkeye® V2 Videoscopes contain a brighter, higher resolution, more durable camera, delivering sharp, clear photos and videos in a wide range of demanding inspection applications. The larger 5" LCD screen provides detailed close-up views, and has a 2X zoom function, mirror image capability, and easy-to-use intuitive controls. Has an articulation mechanism, and has increased the range to +/-150 deg. The insertion tube has rugged, 4-layer construction, with a crush resistant stainless steel inner layer. Available in diameters of 4 and 6 mm, lengths of 1.5m, 3.0m, and 6.0m.

> **VISIT WWW.AIRCRAFTSPRUCE.CA FOR** PART NUMBERS AND PRICING.

HAWKEYE® V3 HD VIDEO BORESCOPES



The Hawkeye® V3 Video Borescope features a new Micro HD video camera, and custom-engineered image processor. The 4- and 6-mm Hawkeye V3's deliver simply the best image quality of any borescope on the market today! Video footage, and still images, captured by the V3 appear crystal clear and with vibrant, lifelike colors.

Building on the popular Hawkeye V2 Video Borescope, which was launched in 2012, the new Hawkeye V3 incorporates significant technological advancements, and represents the next generation of video borescopes designed and manufactured by Gradient Lens Corporation. The V3 also incorporates a large, 5.5-inch HD, daylight readable, touchscreen display.

The V3 easily displays, captures, and transmits over WiFi, crystal clear High-Definition (HD) video and still images, and does so using a sleek, ergonomic design, superior construction, and intuitive user interface.

The Hawkeye V3 is a valuable tool for numerous manufacturing quality control applications... in the QC Lab and on the shop floor. The V3 is also an essential tool for aircraft, and power generation, windpower, and engine and systems maintenance teams. The fully portable V3 provides fast, accurate diagnostics, in mission-critical situations, without the need for costly, time-consuming engine teardown.

Interchangeable 90-degree and close-focus optical tips are optional. The smooth servo-driven articulation range is +/- 180 degrees. The V3 can operate continuously for 6 hours without the need for recharging. The V3 contains an integrated, high-efficiency Micro LED light source.

Diameter	Length	Part No.	Price
4mm	1.5m (4	12-05637	
4mm	3.0m (9	12-05638	
6mm	3.0m (9	12-05639	
6mm	1.5m (4	12-05640	



ENGINE OIL PRESSURE TEST KIT

Test and diagnose problems with engine oil pressure in diesel or gasoline engines with this easyto-use kit. The oil pressure test kit contains a wide assortment of durable brass adapters designed to fit most engines. The kit includes a rugged 66 in. high pressure rubber hose and a tough steel gauge that withstand even harsh work conditions. P/N 12-05093

SEEKER 300 VIDEO BORESCOPE SYSTEMS



The Seeker 300 Video Borescope System offers a large 3.5inch LCD color monitor and a 5.5mm flexible, configurable camera probe with adjustable LED lighting. Ideal for use in the visual inspection of otherwise inaccessible areas. This Video Borescope Kit also includes a mirror, magnet

and pick-up hook that can be attached to the end of the probe. 3.5" (88.9mm) Color LCD Screen for crystal clear image, superb clarity and viewing effect. 5.5mm or 12mm diameter Camera-tipped Probe is flexible and strong with built-in adjustable LED lighting, and is slim enough to perform automotive engine check-up. Probe Length: Standard: 3.28ft. (1m), Optional: up to 16ft (5m). View findings instantaneously. 12mm ProbeP/N 12-02297

VOYAGER ARTICULATING VIDEO BORESCOPE The state-of-the-art ATS Voyager videoscope features an

articulating tip that swings 240 degrees to reach every inspection point of an airplane. With a simple turn of the control knob, you can move its Tungsten-sheathed tip from side to side to look left, right, and even backwards! The ATS Voyager gives you unprecedented access to areas that simply cannot be reached with a straight probe. Included with the ATS Voyager is a 70 degree tip mirror to look at right angles to the normal line of sightP/N 12-04561

USA 4 WAY ARTICULATING PORTABLE RECORDING VIDEOSCOPE



An articulating videoscope with its own internal light-source, video recording, picture taking, and SD card storage. This unit features tungsten sheathing as found in many other higher end videoscope systems. The image quality provides an improvement over flexible fiberscopes which typically will feature between 9,000-15,000 pixels. This unit is a basic system to allow for a low cost inspection option. P/N 12-04966

USA 2 WAY ARTICULATING PORTABLE RECORDING VIDEOSCOPE



The USAVS2-2.8-1000 has been added to USA Borescopes economy videoscope line up because it offers end users the opportunity to upgrade from a lower cost fiberscope to an articulating videoscope with its own internal lightsource, video recording, picture taking, and SD card storage. This unit features tungsten sheathing as found in many other higher end videoscope systems. The image quality provides

an improvement over flexible fiberscopes which typically will feature between 9,000-15,000 pixels. This unit is a basic system to allow for a low cost inspection option......P/N 12-04963

VIVIDIA ABLESCOPES AND BORESCOPES

VIVIDIA ABLESCOPE VA-400

Connect this borescope to your computer or tablet (optional, sold separately) with attached USB cable to perform a detailed visual inspection in hard-to-reach areas. The 180-degree articulating 8.5mm diameter probe offers a panoramic view

of the area being inspected. With 1M pixel CMOS sensor, and six builtin LEDs for illumination, this product allows you to view images, take standard photos, and record videos. This borescope is designed for the inspection of the carbon residue inside of cylinder especially the surface of the intake valve. It is perfect for 'looking backside' after the scope goesP/N 12-04891 into a narrow space



VIVIDIA ABLESCOPE VA-408

Vividia VA-408 is a long version of VA-400 USB oneway articulating rigid straight borescope. The probe tube of VA-400 is 400mm (15.8"), while VA-408 has 800mm (31.5") long probe tube. P/N 12-05641



VIVIDIA LCD & WIFI TWO WAY ARTICULATING **INSPECTION CAMERA BORESCOPE VIDEOSCOPE**

Vividia CT-6010 LCD/WiFi Waterproof Two-Way Articulating Video Borescope with 4.5" Monitor and 6mm Diameter 1.0 Meter Long Probe.



VIVIDIA LCD & WIFI TWO WAY ARTICULATING INSPECTION CAMERA BORESCOPE VIDEOSCOPE

Vividia CT-4010 LCD/WiFi Waterproof Two-Way Articulating Video Borescope with 4.5" Monitor and 4mm Diameter 1.0 Meter Long Probe. P/N 12-05631



VIVIDIA JOYSTICK 360° ALL AROUND ARTICULATION VIDEO BORESCOPE

Vividia ME-610i USB Flexible Smartphone Joystick Articulating Inspection Camera Borescope has 6mm diameter and 1 meter long flexible probe, which is covered with polymer tube for durability and waterproof IP67. Vividia ME-610i has bright LED lights, joystick pivoting 6mm (0.236") probe camera and it can be used to look into dark places as a diagnostical inspection camera. P/N 12-05629



VIVIDIA ABLESCOPE VA-920

Vividia Ablescope VA-920 is a handy borescope inspection tool. It is short and the semi-flexible cable can be formed to shapes you want. The image is clear, and can be connected to PC, Mac, Android devices. P/N 12-04893



VIVIDIA ABLESCOPE VA-980

Vividia Ablescope VA-980 Semi-Flexible Digital Inspection Camera Borescope has long semi-rigid cable, which can be molded with hand to different shape and keep it. VA-980 has bright LED lights, 8.5mm cable camera and it can be used to look into dark places. VA-980 can be connected to PC, Mac, Android devicesP/N 12-04894



VIVIDIA IPS JOYSTICK ARTICULATING VIDEOSCOPE **BORESCOPE INSPECTION CAMERA**

Vividia ME-610X IPS Joystick Articulating Automotive Industrial Borescope Inspection Camera is specially designed for automotive and industrial inspection and diagnostics.

P/N 12-05632



VIVIDIA ABLESCOPE WIFI AIRBOX USB TO WIFI CONVERTER FOR USB DIGITAL BORESCOPES

Vividia W03 WiFi AirBox USB-to-WiFi Converter Adapter for iOS and Android devices for Digital Borescopes and Microscopes is designed to convert the USB output from USB borescopes and/or microscopes into a WiFi hotspot. It works with UVC (USB Video Camera) that has MJPEG or YUY2 format outputs.

This W03 WiFi AirBox is suitable to your USB digital microscopes, borescopes, cameras, inspection cameras etc... With this device, you can use your iPhone, iPad, Android phones and tablets to access your USB microscopes, borescopes and inspection cameras through WiFi connection. The free app, WIFI Image, can be downloaded from Apple's App Store and Google Play Store

With Battery......P/N 12-05636 Without Battery......P/N 12-05635



VIVIDIA D3145 USB DIGITAL BORESCOPE Vividia D3145 USB Digital One-Way Articulating

Borescope has 4.5mm diameter camera probe and 1 meter long insertion tube. D3145 can only be bended in one direction, and the maximum bending angle is ~180 degree. The insertion tube has metal braided outside layers and the bending part is also made with stainless steel, which offers good abrasion resistance. With USB connection, one can connect Vividia D3145 Digital Borescope to a Windows PC (WIndows XP, 7, 8 and 10), MacBook, android devices. With VA-B2 AirBox wifi wireless converter and our "AirBox" app from Google Play Store or Apple App Store, one can use own iPhone/iPad or Android device with Vividia D3145 USB articulating borescope.

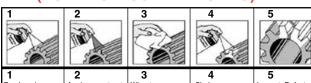


VIVIDIA D3160 USB DIGITAL BORESCOPE Vividia D3160 USB Digital One-Way Articulating Borescope has 6mm diameter camera probe and 1 meter long insertion tube. D3160 can only be bended in one direction, and the maximum bending angle is

~180 degree. The insertion tube has metal braided outside layers and the bending part is also made with stainless steel, which offers good abrasion resistance. With USB connection, one can connect Vividia D3160 Digital Borescope to a Windows PC (WIndows XP, 7, 8 and 10), MacBook, android devices. Vividia D3160 Articulating Borescope is an ideal tool for automotive, airplane, aviation, manufacturing, and instrument inspections. The small diameter probe of D3160 borescope makes it good for diesel engine inspection.. P/N 12-05428

ETRANT INSPECTION K

MAGNAFLUX NDT (NON-DESTRUCTIVE TESTING) KIT



Preclean inspection area. Spray on Cleaner, wipe on Cleaner, v

Apply penetrant. Allow short penetration period.

Wipe to remove Penetrant from surface. Use Cleaner, moistened towel if surface is rough.

Shake can and spray on a thin film of Developer. 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.

MAGNAFLUX SPOTCHECK NDT (NON-DESTRUCTIVE TESTING) - 4 CAN 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.

4-CAN SPOT CHECK® TEST KIT

SK-416 - Includes: • SKC-S, 2 aerosol cans • SKL-SP2, 1 aerosol can • SKD-S2, 1 aerosol can • SCRUBS® hand cleaner towels, 3 towels • DYKEM® Brite-Mark yellow paint marker, 1 pen • Shop Cloth, 1 towel Magnaflux 4-can kit - SK-416.....P/N 09-00391 DeveloperP/N SKD-S2 Cleaner/Remover (12oz. Aerosols)......P/N SKC-S

MAGNAFLUX SPOTCHECK NDT (NON-**DESTRUCTIVE_TESTING) KIT - 8 CAN**



In The Box:

- 4 x Aerosol cans of SKC-S cleaner
- 2 x Aerosol can of SKL-SP2 penetrant
- 2 x Aerosol can of SKD-S2 developer......P/N 09-05791

This clear, fast-drying solvent can be used for pre-cleaning, post-cleaning and penetrant removal.

16 oz	P/N 09-01188
Gallon	P/N 09-04508
Case (4 Gallons)	P/N 09-04509

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 09-04661

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.

16 oz	P/N 09-01190
Gallon	P/N 09-04510
Case (4 Galons)	

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 inspec-

tion 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 (16 Ounces)P/N 09-03040

MET-L-CHEK PENETRANT VP-30



VP-30 is a visible (Type 2), water washable (Method A) and solvent removable (Method C) inspection penetrant. It is designed for use in general metalworking, welding, nuclear and automotive applications for surface flaw and through leak detection. VP-30 has found wide use in the inspection of food and dairy processing equipment such as heat exchanges. Visible penetrants are not rated by sensitivity levels per AMS-2644 but are considered approximate to level 1 fluorescent penetrants. 50µ discontinuities are readily detected and under controlled conditions 30µ size defects may be high lighted by visible pen-

etrants. ISO-3452-2005 does rate visible penetrants by sensitivity level with #2 being the most sensitive. VP-30 is a level 2 per this specifications requirements......P/N 09-04320

MET-L-CHEK CLEANER/ REMOVER E-59A



E-59A is a class 2 (non-halogenated), Method C inspection penetrant remover. It is designed for use in the solvent wipe technique for penetrant inspection in general metalworking, welding, nuclear and automotive applications. It is a moderand pre-inspection surface cleaning. As a pre-cleaner it is sprayed directly on the test surface. As a penetrant remover it is sprayed onto wiping media and then the penetrant wiped from the surface. The remover should not be sprayed directly on to the test surface to remove the excess penetrant as the sensitivity will be impaired.....P/N 09-04307

s-L-Ch

MET-L-CHEK DEVELOPER D-70

D-70 has been used by automotive manufacturers to assist in locating oil and gas leaks in engine components and hydraulic lines. The area of interest is cleaned and the developer applied. The engine is run and the oil leak will appear as a dark spot on the white coating. Reminiscent of the old oil and whiting inspection used by railroads before the advent of modern penetrant inspection materialsP/N 09-04303



MET-L-CHEK MPI-1400B FLUORESCENT WET METHOD PARTICLE BATH

MPI-1400B is a premixed, ready-to-use, fluorescent magnetic particle bath available. It is a mixture of MPI-Carrier Fluid C2 and MPI-1400 fluorescent particles. Particle concentration level is ≈ 0.35 in the 100mL centrifuge tube. Aerosols are pressurized with nonflammable, environmentally friendly CO2. P/N 09-05862



MET-L-CHEK FP-923 FLUORESCENT INSPECTION PENETRANT

FP-923 is used for the detection of fine cracks, porosity, and through leaks on metals, composites, synthetic materials, and some plastics. The materials used are low in sulfur and halogens, VOC free, and safe for use on all metal surfaces. It is bright yellow, smooth washing and non-gel forming, allowing a clean wash cleanly from rough surface. It is applied by immersion, spray, or wipe on and is approved for high sensitivity aerospace applications.

For Method C applications it is used with E-59, E-59A, R-503, and R-504.P/N 09-05863

TUBE BENDERS – CUTTERS – FLARING TOOLS

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
1/4"	364-FHA-04	12-20004	9/16"	
5/16"	364-FHA-05	12-20005	11/16"	
3/8"	364-FHA-06	12-20006	15/16"	
1/2"	364-FHA-08	12-20008	1-1/2"	
3/4"	364-FHA-12	12-20012	3"	



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



BRAIDED STAINLESS STEEL HOSE CUTTER

The AN braided stainless steel hose cutter makes quick work of cutting hoses to length. It features long handles for better leverage and a rubber no-slip grip. It can cut any braided stainless steel line up to size 12 AN. P/N 12-02574



PLASTIC TUBE SHEAR



EZ-BEADER TUBING BEADERS

Compact design. Capable of tubing wall thickness from .035 to .065 thick

Size	Description	Part No.	Price
3/4"	EZ-BEADER TP885D	12-00357	
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	



HI-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.



"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



MINI TUBING CUTTER

The mini tube cutter's compact design is ideal for tight spots under sinks and behind appliances. It cuts copper, brass and aluminum tubing from 1/8" to 1 1/8".

P/N 15-07093



MINI TUBING CUTTER

Performs where conventional tubing cutters simply cannot fit. With a 1-1/2" swing radius, the Mini Cutter is ideal for limited-space applications. Accepts tubing sizes from 1/8" to 7/8" in diameter and up to 1/8" in wall thickness. Capable of cutting through copper, aluminum, brass and thin-wall stainless steel.

P/N 12-03348



TUBING CUTTER

Tubing sizes from 1/8" to 1-1/8", and up to 3/16" in thickness. The cutter easily slices through copper, aluminum, brass, stainless steel and other tin-wall tubing. Uses the RW122 cutting wheel. Includes a retractable reamer with dual cutting edges.

P/N 12-03347



COMPOUND TUBING BENDER



HI-DUTY FLARING TOOL 37°

For: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing. 437-FB For use with soft copper, aluminum and brass tubing. New slip-on yoke permits use in tight quarters, allows flaring where there is little space between nut and tube end. Wt. 1.75 lbs... P/N 12-01581



ROL-AIR FLARING TOOL 37°

Faceted, hard chrome finished cone rolls out perfect flares above die block, then automatically burnishes flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. Flares and burnishes: 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°



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



37° DOUBLE & SINGLE 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. Double Lap Flare: 1/4", 5/16", 3/8". Single Lap Flare: 3/16", 1/2". Wt. 4 lbs.

P/N 12-00205



37° DOUBLE & SINGLE LAP FLARING TOOL KIT

Forms 37° double lap flares to AN10078 in soft copper and aluminum tubing (wall thickness to .040"). Also includes a tubing cutter, an innerouter reamer, and a plastic carrying case. Double Lap Flare: 1/4", 5/16", 3/8". Single Lap Flare: 3/16", 1/2". A quality tool kit which is made in the U.S.ÁP/N 12-00210

FLARING TOOL KIT 402FA



Forms 37° flares aircraft grade stainless steel (MIL-T-6845), titanium, and other metal tubing, both soft and hard. Positive stop gauge assures correct size of flare. The three rollers in the flaring cone roll out 37° flares above the die block while burnishing the flare face to a smooth finish. A built in extension on the yoke can be clamped in a vise for extra support. Satin chrome and black nickel

finish. Complete kit includes flaring tool and reaming yoke.
P/N 12-02423



BRAKE LINING & GENERAL RIVET SETS

Deluxe Model (404) - 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. Deluxe Model (Threaded)

P/N 12-20810

Punch Non-Threaded / Brake Relining for model 403...P/N 12-01171

Anvil Punch/Brake Relining for model 404 P/N 12-01170

Brake Lining Rivet 4X6......P/N 06-02300 BR1007 Rivet Set for RelineP/N 12-01173



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 tooled 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 standardsP/N 12-01049



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"

P/N 12-01698



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 -

ATS HAND RIVET SQUEEZER



Has a very solid feel, and professional look that will complement anyone's toobox. Squeezes up to 5/32" aluminum (1/8" seel) rivets. Works with any rivet

sets, or diple 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 bushed 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

PRO HEAVY DUTY RIVET SQUEEZER



1-1/2" Reach. 1-1/4"gap height. 3/16" aluminum rivet capacity. 360 degree swivel head locks yoke locks in any position for greater versatility 5/8" adjustable ram eliminates the need for shims. Longer handles for better leverage. 3/16" aluminum (5/32" steel) rivet capacity. 21" overall length. Does not come with squeezer sets.

P/N 12-04961

RIVET SQUEEZER BENCH UPGRADE KIT

Upgrade kit converts 5011-1 (12-04961) Rivet Squeezers to new bench model. Easy to install. Does not work with older model rivet squeezers.

P/N 12-04962



PNEUMATIC "C" SQUEEZER KIT

Lightweight and has the same power as the Chicago Pneumatic 214C squeezer on which it is based. It accepts the same yokes and attachments as the 214C squeezer, and is powerful enough to squeeze up to 1/8" solid aluminum, or 3/32" solid steel rivets.

Complete kit includes ATS-114C Squeezer with a 1-1/2" yoke (p/n 14-3), a Longeron yoke (14-10), and a 17 piece assortment of squeezer and dimpler snaps. Features: • Compatible with Chicago Pneumatic 214C squeezers • Squeezes up to 1/8" aluminum or steel rivets • Compact only 10" long • Accepts all squeezer and dimpling sets with a .187" shank......P/N 12-03504

Description	Part No.	Price
Squeezer Yoke 1-1/16"	12-03663	
Yoke, Longeron	12-03664	
Squeezer Yoke 1-3/16"	12-03665	
Squeezer Yoke 1-1/2"	12-03666	
Squeezer Yoke 1-3/4"	12-03667	
Squeezer Yoke 2-1/2"	12-03668	
Squeezer Yoke 2-3/4"	12-03669	
Squeezer Yoke 3"	12-03670	
Squeezer Yoke 3-7/8"	12-03671	
Squeezer Yoke 5-5/8"	12-03672	
Squeezer Set Assortment, 17pc	12-03673	

ATS DELUXE HAND/BENCH **RIVET SQUEEZER KIT**



The Rivet Squeezer Kit is designed to take on any riveting task. It contains the new ATS Heavy Duty Rivet Squeezer, a Bench Mount Kit, plus and extra 1-1/2" yoke head to reach into tight areas. You'll also get a complete set

of squeezers and dimple dies in a convenient holder. Ats Pro Lifetime warranty. 14 lbs (6.5Kg) shipping weight P/N 12-02406

HANDI-CLAMPS

Handi-Clamps are a specially designed tool for clamping various types of surfaces, shapes and thicknesses. Ideal for holding light plastics, wood, sheet metal and other materials temporarily. The clamping cap is 0-5/16" TP640HC - 1" Jaw DepthP/N 12-02305

TP641HC - 1-1/2" Jaw DepthP/N 12-02306



SIDE GRIP CLAMPS

Side-Grip clamps are designed to clamp at the edge of the work area. Ideal for holding work pieces of all types, particularly during bonding, sealing or gluing operations. Plier-operated. Spring loaded. Constant clamping force. Color-coded for easy identification. Use TP74 or US902 installation tool. Made in the USA

Part No.	Clamping CAP (GAP)	EFF. Body Depth (Reach)	Body Length	Price
12-01161	0-1/2"	1/2"	2-3/16"	
12-01162	0-3/4"	1/2"	2-7/16"	
12-01143	0-1/2"	1"	2-3/16"	
12-02643	0-3/4"	1"	2-7/16"	



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 12-01079....... ---/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-3-3/16	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-3-3/16	3/16"



TATCO HAND RIVET SQUEEZER

This tool was designed and built as a portable low cost solution for both small and large aerospace applications. It is made of aerospace grade stainless steel and heat treated on all wear and deflecting components to 38/42 on the Rockwell Hardness Scale. A

large variety of interchangeable yokes are available with ranges from as small as 1.00" to 6.00" reach. It has proven itself over the years as a portable rugged solution, for light to medium duty, rivet squeezing applications.

Model	Dimensions	Part No.	Price
THS-10	1-1/4" Gap x 1" Reach	12-03674	
THS-15	1-1/4" Gap x 1-1/2" Reach	12-00300	
THS-20	1-1/4" Gap x 2" Reach	12-03675	
THS-22	2" Gap x 2" Reach	12-03676	
THS-25	1-1/4" Gap x 2-1/2" Reach	12-03677	
THS-30	1-1/4" Gap x 3" Reach	12-03678	
THS-35	1-1/4" Gap x 3-1/2" Reach	12-03679	
THS-40	1-1/4" Gap x 4" Reach	12-03680	
THS-50	1-1/4" Gap x 5" Reach	12-03681	
THS-100	1" Gap x 2" Reach	12-03683	
THS-101	1-1/4" Gap x 1-1/2" Reach	12-03684	

TATCO SQUEEZER YOKES FOR RIVET SQUEEZER

Model	Description	Part No.	Price	Model	Description	Part No.	Price
THY-10	1" Yoke	12-00308		THY-40	4" Yoke	12-00322	-
THY-15	1.5" Yoke	12-00309		THY-50	5" Yoke	12-00323	-
THY-20	2" Yoke	12-00310		THY-100	1" x 2" Yoke	12-03688	-
THY-22	2" x 2" Yoke	12-00315		THY-101	No Set Hole	12-03689	-
THY-25	2.5" Yoke	12-00318			•		

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".

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

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

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





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

2011200-3-N	
207/206-3-S	
207/206-4-P	
207/206-4-R	
207/206-4-S	
207/206-5-P	
207/206-5-R	
207/206-6-P	
207/206-6-R	
207/206-6-S	

207/206-3-P



SIZE	3/32	1/8	5/32	3/16
DASH NO.	-3	-4	-5	-6
BODY LENGTH	1/4	3/8	1/2	
AFTER DASH NO.	-P	-R	-S	

INDIVIDUAL CUPPED SOUEEZER SETS

Rivet Diameter	Body Length ("L" Dim.)	Part Number	Price
3/32"	3/8	AT108AR-3/32	
3/32"	1/4	12-01661	
3/32"	1/8	AT108AN-3/32	
3/32"	1/2	AT108S-3/32	
1/8"	1/8	AT108AN-1/8	
1/8"	1/4	12-01660	
1/8"	1/2	AT108S-1/8	
1/8"	3/8	AT108AR-1/8	
3/16"	1/4	12-02680	
3/16"	1/2	AT108S-3/16	
3/16"	3/8	AT108AR-3/16	
3/16"	1/8	AT108AN-3/16	
5/32"	1/4	12-01662	
5/32"	3/8	AT108AR-5/32	
5/32"	1/8	AT108AN-5/32	
5/32"	1/2	AT108S-5/32	



FLUSH RIVET SETS

Body Length ("L" Dim.)	Part No.	Price
1/8"	AT109AN	
3/8"	AT109AR	
1/2"	AT109AS	



DIMPLE DIE SETS

The "Spring back" dimple dies are the bestdesigned dimple dies on the market today. These 100 degree dies are designed to greatly reduce

100 degree dies are designed to greatly reduce deflection of the sheet metal. This stainless steel tool is built for years of quality service. The 3/16" shaft enables use in most pneumatic and hand squeezes.

#6 Male/Female #6 Screw	P/N 12-05535
#8 Male/Female #8 Screw	P/N 12-05536
3/16" Male/Female AN426	P/N 12-05537



ATS ADJUSTABLE SQUEEZER RAM

Adjustable ram eliminates the need for shims. Simply rotate the set holder until the desired clearance is reached and begin riveting. Made of hardened high strength steel and polished to minimize surface wear.

P/N 12-04968



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



FLUSH RIVET SET WITH RUBBER RING

Features a rubber ring around the face to reduce slippage and to prevent damage to aircraft skin. Face Diameter: 1 1/4". Shank: 0.401.

Rivet Set P/N 12-03361 Replacement Rubber Ring... P/N 12-03362



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

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 resharpenings 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



COUNTERSINK SETS

Countersinks made of high-speed steel, 3-fluted and 14" - 28 threaded. Set includes #40, #30, #21, #10, and 1/4".

SNAP SOC RIVET SET CAPS



Insert these caps onto the ends of your rivet sets to provide a protective zone between the rivet set and the rivet. Helps to prevent

against damage to the rivet or adjoining aircraft skin. Color coded for easy use. Each cap lasts for approximately 50-70 rivets. **Note: Rivet Set pictured is not included.**

Color	Size	Part No.	Price
White	3/32"	12-03363	
Orange	1/8"	12-03364	
Green	5/32"	12-03365	
Yellow	3/16"	12-03366	
Blue	1/4"	12-03367	



DIE GRINDER MANDREL

Die Grinder Arbor (Mandrel). Holds your cutoff wheels. It has a 1/4" shank for use in most drills and die grinders. Can accomadate either 1/4" or 3/8" cutoff wheel through hole sizes.

P/N 12-02924

HAND SEAMER

Handy tools for comparatively light work. Wide, deep jaws machined for smooth parallel fit. Form precise folds and seams. Strong, lasting dropforged 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

Makes permanent, tight fitting seams. Strong, lasting construction. Jaw Size: 1" D x 3-1/2" W. Overall Length: 8" (203 mm). Weight: 1.1 lbs (0.5 kgs)P/N 12-03751



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



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

PRO PNEUMATIC C DOUBLE **FORCE SQUEEZER**



The ATS Tandem C-Squeezer incorporates two pistons to deliver twice the force of a standard squeezer at the same air pressure. Its lightweight, compact, and efficient design is modeled after the industry standard Chicago Pneumatic 0214-C squeezer.

The parts are completely interchangeable, and it will accept any jaws and accessories compatible with the 0214-C. With enough force to squeeze up to 3/16" solid aluminum, or 5/32" mild steel rivets, this riveter will easily fit most of your riveting needs without breaking your budget. P/N 12-04980

ATS DUAL SUPER DUTY RIVET SQUEEZER



The Dual Squeezer Kit features a whole 3" squeezer! Included in the kit is a Stainless Steel Rivet Squeezer with a 1 1/2" yoke, as well as 3" yoke. ATS also includes a 17 piece dimple die set, and rivet gauges to get the job done right. Finally, all of this comes in a custom foam lined case.

P/N 12-05451

ATS FIELD RIVETING KIT (2X) The ATS Pro Field Kit features the line



tools. In it you get the best-selling Palm Drill (featuring a true variable speed trigger from 0 to 2600 RPM), plus an assortment of cobalt drill bits in the 4 most commonly use sizes (#40, #30, #21, and #12). For perfect riveting jobs, ATS gives you the top of the line Pro Rivet Gun with feather trigger

(including springs), two of the most popular Tungsten bucking bars, and a full set of riveting snaps. ATS has even thrown in a set of rivet gauges to make sure you get things right, and a bottle of oil to keep those tools running at peak performance. It all comes to you in a quality shadowfoamed hard tool case, making this the kit you will want to show off! Black...P/N 12-05448

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, 1/8, 5/32, 3/16, 5 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.



Price	Part No.	Size
	12-01800	3/32"
	12-01900	1/8"
	12-02000	5/32"
	12-02100	3/16"
	12-02200	7/32"
	12-02300	1/4"
	12-02400	9/32"

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 ShrinkerF	P/N	12-19800
#LST-82 StretcherF	P/N	12-19900
Combination Shrinker/Stretcher ToolF	P/N	12-02950

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

SKYBOLT SK2018 SET COMPLETE ZLOC ASSEMBLY WITH DIES Skybolt SK2018 SET Complete ZLOC Assembly with dies.

In The Box: • SK2018C Clamp • 9 Zloc Die Sets • Press Adapter • Dimple Tool Adapters.
P/N 04-04102



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 sol-

vents. General Purpose • Clean up dirty parts in solvent tank • Light corrosion removal on steel and aluminum parts Commercial • An aggressive hand pad for waterbased 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	1 each	12-00861-1	
Ultra Fine	6" x 9"	S/C	Gray	1 each	12-00862	
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	

ERRY RIVET TOOL

HYDRO-SHIFT CHERRYLOCK® RIVETER



Specifically for the installation of all CherryLOCK® Rivets. Recommended primarily for 1/4" diameter CherryLOCK® rivets. It can be used to install all diameters and lengths as indicated on the tool capacity charts. Low recoil, low noise and a comfortable fit in the operator's hand. It can be operated in any posi-tion with one hand. The H681 Series pulling heads fit directly on this tool to install both bulbed and standard NAS type 2000 Series CherryLOCK® Rivets. With the proper adapters and pulling heads, this tool can install other types of rivets.....P/N 12-02983



LOCKBOLT POWER RIVETER G84

For high speed, reliable installation of the most popular sizes of aircraft Lockbolts. Incorporates a bayonet attachment for quick change of pulling heads. This tool can also be used to install blind bolts and blind rivets. A comfortable grip for one handed operation in any position. Compatible with Huck 352 & 230 riveter pulling heads......P/N 12-03011



LOCKBOLTPOWERRIVETERTOOLKITG84LBK
Installs: 5/32", 3/16" & 1/4" NAS Style. LockBolt
Includes: G84 LockBolt Power Riveter - Stroke: 9/16", Pulling Force: 5, 750 lbs (2,608 kgs), Weight: 7.7 lbs (3.5 kgs). H513-08-35 Pulling Head. H513S-05-20 Pulling Head Cherry 5/32" D LockBolt. H513S-06-20

Pulling Head MaxiBolt 3/16" LockBolt. P1395 Molded Carrying Case. 269C5 Grip Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals. P/N 12-03013



CHERRY RIVETER SERVICE KIT G84KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G84. P/N 12-03012



LIGHTWEIGHT LOCKBOLT **RIVETER TOOL KIT G83AKT**

Installs: 5/32" & 3/16" MS Blind Bolt & LockBOLT, 1/8",

Installs: 5/32" & 3/16" MS Blind Bolt & LockBOLT, 1/8", 5/32" & 3/16" Cherry MAX Includes: G83 Lightweight LockBolt Hand Riveter - Stroke: 7/16", Pulling Force: 3, 750 lbs (1, 701 kgs), Weight: 4.95 lbs (2.3 kgs). H513S-05-20 Pulling Head Cherry 5/32" D LockBolt. H513S-06-20 Pulling Head 3/16" LockBolt. H701B-456 Pulling Head Straight 3/4" x 1 3/4". H753A-4562 CherryMAX Pulling Heads RT Angle 2 1/4" x 5 7/16" x 3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". H83B-5MB Pulling Head MaxiBolt 5/32"D. H83B-6MB Pulling Head MaxiBolt 3/16" D G83/G84. P1393 Plastic Rox. 269R12 MaxiBolt Gauge. 269C3. CherryMAX Grip. P1393 Plastic Box. 269B12 Maxibolt Gauge. 269C3 CherryMAX Grip Gauge. 269C5 Grip Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. 744-300 Adapter. All Necessary Manuals P/N 12-03008



LIGHTWEIGHT LOCKBOLT

RIVETER TOOL KIT G83BKT
Installs: 5/32" & 3/16" MS Blind Bolt & NAS Style
LockBolt Includes: G83 Lightweight LockBolt Hand
Riveter - Stroke: 7/16", Pulling Force: 3, 750 lbs (1,
701 kgs), Weight: 4.95 lbs (2.3 kgs). H513S-05-20 Pulling Head Cherry
5/32" D LockBolt. H513S-06-20 Pulling Head 3/16" LockBolt. H83B-5MB
Pulling Head MaxiBolt 5/32"D. H83B-6MB Pulling Head MaxiBolt 3/16"
D G83/G84. P1393 Plastic Box. 269B12 MaxiBolt Gauge. 269C5 Grip
Gauge LockBolt 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Gauge LockBolt. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals......P/N 12-03009



CHERRY RIVETER SERVICE KIT G83KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G83. P/N 12-03010

LIGHTWEIGHT LOCKBOLT RIVETER G83



Designed for high speed, reliable installation of the most popular sizes of aircraft Lockbolts. By bending the rubber pin deflector sideways, 1-1/2" additional clearance can be obtained. This tool can also be used to install blind bolts and blind rivets. A comfortable grip for one handed operation in any position. Compatible with



CHERRY RIVETER SERVICE KIT G800KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G800. P/N 12-03006



CHERRYMAX HYDRAULIC HAND **RIVETER G800**

The G800 is an ergonomic, lightweight hand powered riveter capable of installing a wide variety of blind fasteners. The all metal design makes this compact and

robust tool ideal for use in rugged shop environments or field repair. Exceptional power with low hand effort for increased productivity. Mounting system (same as G704B) compatible with popular pulling heads including H782, H781-456& H753A-456. Leak-proof design with advanced seals & built-in redundancies. Ergo design with internal shock absorber & cushioned handle. Adjustable lever easily accommodates different hand sizes. Stroke: 3/4". Pulling Force: Up to 6000 lbs. Weight: 1.7 lbs (0.8 kgs)P/N 12-03004



CHERRYMAX HYDRAULIC HAND **RIVETER KIT G800CMR**

G800CRM CherryMAX Hydraulic Hand Riveter Kit Includes: G800 CherryMAX Hydraulic Hand Riveter Stroke 3/4", Pulling Force up to 6000 lbs, Weight 1.7 lbs. H781-456 Pulling Heads. H753A-456 Pulling Heads. 269C5 Grip Selector Gauge. 269B12 Grip Selector Gauge. Molded Plastic Case. All Necessary Manuals (except -6 all aluminum)

P/N 12-03005



CHERRY RIVETER SERVICE KIT G784KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G784. P/N 12-03002



NUT-PLATE RIVETER G702A

The G702A is a pneumatic-hydraulic tool designed specifically for installation of nut plate rivets. Its durable, all metal housing makes this tool ideal for use in rugged shop environments. The H702-3NPR pulling head fits directly on the tool to install -3, -4, 2.5 mm & 3mm nut plate rivets. 10° angled head allows user to

work using a natural hand position. A comfortable grip for one handed operation in any position. Air Pressure: 90 PSI (6.2 bar) min./110 PSI (7.6 bar) max. Cycle Time: approximately one second. Noise Level: 71 dB (A). Vibration: less than 2.5 m/s2. Air Consumption: .09 SCF / cycle (2.55 L / cycle). Stroke: 3/4". Pulling Force: 1,100 lbs (499 kgs). Weight: 3.5 lbs.P/N 12-02985



CHERRYLOCK POWER RIVETER KIT G784CLRB

Includes: G784 Cherry Universal Power Riveter 12" High, 8 lbs., 15/16" Stroke. P1395 Molded Carrying Case. TLC852 CherryLock Selector Card. TLC864

CherryLock Process Manual. 269C3 CherryMAX Grip Gauge. 700A77 Bleeder Bottle. Note: No Pulling Heads Included.

P/N 12-03001



CHERRYLOCK POWER RIVETER G784

Installation of CherryLOCK rivets. Will install nearly all diameters of CherryLOCK rivets up to a half-inch grip, 'A' group only. With proper adapters & pulling heads this tool can be used to install other types of rivets. A comfortable grip for one handed operation in any position. Pulling heads not included with riveter. Air Pressure: 90 PSI (6.2 bar) min./110 PSI (7.6 bar) max. Noise Level: 69.7 dB (A). Vibration: less than 2.5 m/s2. Air Consumption: .27 SCF / cycle (7.65 L / cycle). Stroke: 7/8". Pulling Force: 2,600 lbs (1, 179 kgs). Weight: 8 lbs (3.6 kgs).....P/N 12-02998



POWER RIVETER G747

Installation of CherryMAX and nut plate rivets. This tool utilizes straight, offset and right angle pulling heads, all of which can install -4, -5 and -6 diameter CherryMAX bulb type rivets in all head styles, materials and grip lengths. Extensions are available for extending the pulling heads to reach limited access areas. 10° angled head allows user to work using a natural hand position. A comfortable grip for one handed operation in any position. Same weight as the G702A, with the

power of much larger toolsP/N 12-02995

CHERRYLOCK POWER RIVETER KIT G784CLRA

Installs: 1/8" to 3/16", NAS 1398/9. Type & Cherry Lock. Includes: G784 Cherry Universal Power Riveter 12" High, 8 lbs., 15/16" Stroke. H681-4C CherryLock

H681Pulling Heads Dia. 1/8" Dim. A=.208 B=.341. H681-5C CherryLock Pulling Head 5/32" D. H681-6C CherryLock H681 Pulling Heads Dia. 3/16" Dim. A=.335 B=.386. P1395 Molded Carrying Case. TLC852 CherryLock Selector Card. TLC864 CherryLock Process Manual. 269C3 CherryMAX Grip Gauge. 700A77 Bleeder Bottle.

P/N 12-02999



CHERRY RIVETER SERVICE KIT G747KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G747.

P/N 12-02996



CHERRY RIVETER SERVICE KIT G746KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G746A.

P/N 12-02994



CHERRY RIVETER SERVICE KIT G704KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G704B.
P/N 12-02990



CHERRY RIVETER SERVICE KIT G689KS

All the seals, 'O'-rings, gaskets and hardware required for routine maintenance of your Cherry blind riveters. A must for any in-house repair facility. For Tool G689.

P/N 12-02984

BLIND BOLT RIVETER TOOL KIT G84-MBK



Installs: 5/32", 3/16" & 1/4" MS Blind Bolt Includes: • G84 Power Riveter Cherry- Stroke: 9/16", Pulling Force: 5, 750 lbs (2,608 kgs), Weight: 7.7 lbs (3.5 kgs) • H83B-5MB Pulling Head MaxiBolt 5/32" D • H83B-6MB Pulling Head MaxiBolt 3/16" D G83/G84

* H835-6WB Fulling Head MaxiBolt 3/10 D Goorgo
 * H84A-8MB Pulling Head MaxiBolt 1/4" D G84
 * P1395 Molded Carrying Case • TLC872 Cherry Maxibolt Card • 269B12
 Maxibolt Gauge • 670A20 Stem Catcher Bag • 700A77 Bleeder Bottle.
 P/N 12-03015

CHERRYMAX POWER RIVETER KIT G747CMR



Installs: NAS 9301 to 9312 (1/8" to 3/16"). MS90353/4. MS21140/1. TAF "S" TYPE (1/8" & 5/32"). MS20604/5 (3/32"). Includes: G747 Cherry Lightweight - Installs CherryMAX Rivets. H701B-456 Pulling Head Straight



CHERRY POWER RIVETER KIT G746ACMRB
Installs: -4, -5, -6 CherryMAX. Includes: G746A
Power Riveter Cherry 1/8",5/32",3/16" "A" Rivets.
H701B-456 Pulling Head Straight 3/4" x 1-3/4". H753A-456 CherryMAX Pulling Heads RT Angle 2-1/4"X5-7/16"X3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". P1393 Plastic Box. 269C3

CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary Manuals.P/N 12-02992



CHERRYLOCK POWER RIVETER **KIT G746ACMRW**

Installs: SST & -3, -4, -5, -6. CherryLock 'A'. Includes: G746A Power Riveter Cherry 1/8",5/32",3/16" "A" Rivets. H955-3 Pulling Head. H955-4 Pulling Head. H955-5 Pulling Head. P1393 Plastic Box. 269C3 CherryMAX Grip Gauge 670A20. Stem Catcher Bag. 700A27. Rleader

CherryMAX Grip Gauge. 670A20 Stem Catcher Bag. 700A77 Bleeder Bottle. All Necessary ManualsP/N 12-02993

CHERRY POWER RIVETER KIT G704BCMR



Installs -4, -5, -6 CherryMax. Includes: 6704B Power Riverter - Cap = 1/8-3/16" Wt. = 4 1/2 lbs. H701B-456 Pulling Head Straight 3/4" x 1-3/4". H753A-456 CherryMAX Pulling Heads RT Angle 2-1/4"X5-7/16"X3/8". H781-456 Cherry Pulling Head Offet 1/8"-5/32"-3/16". P1393 Plastic Box. TLC816 CherryMAX Process Manual. TLC865 CherryMAX Selector Guard. 269C3 CherryMAX Grip Gauge. 670A20 Stem Catcher

Bag. 700A77 Bleeder BottleP/N 12-02988



CHERRY HAND NIPPER

Used for flush trimming Cherry rivets. P/N 12-02977

GRIP GAUGE LOCKBOLT

Cherry Grip Gauge Lockbolt. Material thickness & grip.... P/N 12-02979

MAXIBOLT GRIP GAUGE 269B12

Cherry Maxibolt Grip Gauge 269B12.

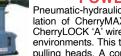
P/N 12-02978

CHERRYMAX GRIP GAUGE



Rivet Grip & Diameter Gauge. P/N 12-00217

POWER RIVETER G746A



Pneumatic-hydraulic tool designed specifically for installation of CherryMAX Bulb, CherryMAX 'AB' wiredraw and CherryLOCK 'A' wiredraw rivets. Ideal for use in rugged shop environments. This tool utilizes straight, offset and right angle pulling heads. A comfortable grip for one handed operation in any position. Stroke: .875". Pulling Force: 1,850 lbs (839 kgs). Weight:

4.25 lbs (1.9 kgs) P/N 12-02991

G84-LS SPLIT POWER RIVETER



Designed for high-speed, reliable installation of the most popular sizes of blind rivets, lockbolts and blind bolts. Fastener installation in many limited access areas and also reduces operator fatigue. This tool installs all Lockbolt, blind bolts and blind rivets to 1/4" diameter, as well as Cherry rivetless nut plate in all sizes. Stroke: 0.53". Pulling Force: 5700 lbs (2608 kgs). Weight: 11.8 lbs (5.4 kgs).. P/N 12-03014

OLT HEAVY-DUTY POWER RIVETER G87D



Heavy-duty production tool designed for high speed, reliable installation of the most popular sizes of aircraft Lockbolts. Ideal for use in rugged shop environments. By bending the rubber pin deflector sideways, 1-1/2" additional clearance can be obtained. This tool can also be used to install blind bolts and blind rivets. Stroke: 9/16". Pulling Force: 9,500 lbs (4,309 kgs). Weight: 10.75 lbs (4.9 kgs)

P/N 12-03016

SPLIT POWER RIVETER G704B-40SH

Installation of CherryMAX rivets in applications with extremely limited access. Equipped with an 8 foot hose. Pulling heads not included with riveter. Hose Length: 8'. Stroke: .518". Pulling Force: 3136 lbs (1423 kgs). Weight: 4.5 lbs (2.0 kgs) (power unit only).......P/N 12-02987



SPLIT POWER RIVETER G704B-SR

Designed specifically for the installation of CherryMAX rivets in applications with extremely limited access. Equipped with an 3 foot hose. Pulling heads not included with riveter. Hose Length: 3'. Stroke: .518". Pulling Force: 3136 lbs (1423 kgs). Weight: 4.5 lbs (power unit only)......P/N 12-02989

NUT-PLATE RIVETER G902 (FEED THROUGH)



All-pneumatic tool designed specifically for installation of nut plate rivets. This tool utilizes straight pulling heads which can install 3/32" and 1/8" pull-through type nut plate rivets and 3/32" CherryLOCK 'A' rivets. Stroke: 3/4". Pulling Force: 550 lbs (250 kgs). Weight: 2 lbs (0.9 kgs)

P/N 12-03017

NUT-PLATE RIVETER G902-15 (SIDE EJECT)



The G902-15 (side eject) is an all-pneumatic tool designed specifically for installation of nut plate rivets. This tool utilizes straight pulling heads which can install 3/32" and 1/8" pull-through type nut plate rivets and 3/32" CherryLOCK 'A' rivets. Stroke: 3/4". Pulling Force: 550 lbs (250 kgs). Weight: 2 lbs (0.9 kgs).....P/N 12-03018



CHERRY HAND RIVETER G30

Pulling head is integral part of tool. Great in areas with limited access or power limitations. The G30 is an efficient, compact and light-

weight tool for installing Cherry LOCK 'A' rivets. Overall length: 9 1/4" (23.5cm). Weight 0.8 lbs......P/N 12-02982

CHERRYLOCK POWER RIVETER TOOL KIT G784KT

Includes: • G784 CherryLock Power Riveter - Stroke: 7/8", Pulling Force: 2,600 lbs (1, 179 kgs), Weight: 8 lbs (3.6 kgs) • B36B740 Valve Spring Installation Tool • B37B740 Valve Sleeve Removal Tool • 74DA43 Shift Piston Tool • 680A114 Seal Guide • 680A114 1 1/2" End Cap Socket Wrench • 680A48/49 Clamp Wrench • 700B65 Packing Plug Wrench • 740A43 Power Cylinder Tool • 700A61 Piston Rod Wrench • P1178 Valve Plug Extractor • 700A60 Seal Guide .. P/N 12-03003

HERRY PULLING HEADS

PULLING HEAD FOR

CHERRYLOCK® A-RIVETS H9055
STEM SIDE EJECTION: H9055 series pulling heads are available for installation of 3/32°, 1/8", 5/32" and 3/16" diameter locked spindle CherryLOCK® 'A' code rivets in all materials, head styles and grip lengths. Stems are ejected from the side of the pulling head.

H9055-3: 3/32"	P/N 12-03132
H9055-4: 1/8"	P/N 12-03133
H9055-5: 5/32"	P/N 12-03134
H9055-6: 3/16"	P/N 12-03135

CHERRY® MS STRAIGHT PULLING HEADS H9040

1 01	LEINA HEADS HSOTO
	Cherry MS Straight Pulling Heads - H9040
State of the last	Series.
H9040-4C	P/N 12-03127
H9040-5C	P/N 12-03128
H9040-6C	P/N 12-03129
	P/N 12-03130

OFFSET MAXIBOLT PULLING HEAD H856-6MB

Maxibolt Pulling Head. Offset head style. Maxibolt Diameters: 3/16" P/N 12-03112

CHERRY® NUT PLATE PULLING HEADS H902

These pulling heads fit directly onto Cherry G902 and G746A Power Riveters.

Cherry P/N	Rivet Dia. Inches	Part No.	Price
H902-3NPR	-3 (3/32")	12-03125	
H902-4NPR	-4 (1/8")	12-03126	-

CHERRY® FLUSH **STYLE PULLING HEADS H9015**



H9015-3C	P/N 12-03121
H9015-4C	P/N 04-01515
H9015-5C	P/N 12-03123
H9015-6C	P/N 12-03124

PULLING HEADS FOR CHERRYLOCK A-RIVETS H955



The H955 Series pulling heads fit directly on the G701A, G704B, G746A and G747 riveters. The heads in this series are capable of install-

ing 3/32", 1/8", 5/32" and 3/16" diameter rivets in all materials and head styles and grip lengths. Stems feed through the pulling head and are ejected out the back of the tool.

H955-3: 3/32"	P/N 12-03136
H955-4: 1/8"	
H955-5: 5/32"	P/N 12-03138
H055-6: 3/16"	P/N 12-03130

COMPACT UNIVERSAL HEAVY **DUTY PULLING HEAD HD800**

Description	Part No.	Price
HD800-6MB Installs Maxibolt -6 "S" type Cherry	12-03140	
HD800-6MBU Installs Maxibolt -6 "U" type / "S" type AFS	12-03141	
HD800-8MB Installs Maxibolt -8 "S" type	12-03144	
HD800-8MBU Installs Maxibolt -8 "U" type	12-03145	
HD800 Installs CherryMAX "AB" -8 (all materials) 8 Dia. MB Plus	12-03142	
HD800-8A Installs Cherrylock "A" code	12-03143	

CHERRY OFFSET PULLING HEAD H782



The Cherry® brand H782 is a new universal, off-set pulling head capable of installing a broad variety of pull-type fasteners. Its strength, light weight and compact dimensions make it ideal

weight and compact dimensions intake it idea for a diverse range of applications including restricted spaces. The H782 is capable of installing CherryMAX rivets, CherryLOCK 'A' code rivets, MaxiBolt 'S' type blind bolts, MBC rivets, SPR rivets, NAS1398 A & AB code products, MS90353/4, MS21140/1, 4, 5, NAS1719, 1720 & 1721 and pull-through type nut plate rivets. Note: Uses CherryMAX mounting system (G704B, G746A, G747).P/N 12-03091



MAXIBOLT STRAIGHT **PULLING HEADS**

For use with G83 & G84 to	ools. For use with Cherry shift washer type only.
H83B-6MB	P/N 12-03101
H84A-8MB	P/N 12-03107
H84C-8MB	P/N 12-03110

MAXIBOLT PULLING HEAD H84B-568



Maxibolt Pulling Head. Straight head style. Maxibolt Diameters: 5/32", 3/16". P/N 12-03109

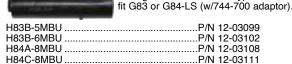


MAXIBOLT PULLING HEAD (S TYPE) H744

Pulling heads to install "U" type Maxibolts®. Will

Cherry P/N	Head Style	MaxiBolt Dia.	Part No.	Price
H744-5MB	Straight	5/32"	12-03085	
H744-6MB	Straight	3/16"	12-03086	

MAXIBOLT U-TYPE PULLING HEAD



MAXIBOLT® PULLING HEAD (S TYPE) H652-8MB



Cherry MaxiBolt Pulling Head (S Type): Head Style - Straight, MaxiBolt Diameter - 1/4" P/N 12-03067



MAXIBOLT RIGHT ANGLE **PULLING HEAD H828**

This pulling head aids installation of MAXIBOLTs in limited access applications. For use with G744 tool. For use with Cherry shift washer type only. Use 744-200 adapter for G83/G84.

Cherry P/N	Head style	Rivet Dia. Inches	Part No.	Price
H828-5MB	Right Angle	5/32"	12-03094	
H828-6MB	Right Angle	3/16"	12-03095	
H828-8MB	Right Angle	1/4"	12-03097	

RIGHT ANGLE PULLING HEAD H690-4C

H690-4C pulling head. 1/8" rivet diameter. Countersunk Head.

P/N 12-03082

PULLING HEAD FOR CHERRYLOCK® "A" **CODE RIVETS H9044-8**

These heads fit directly on the G55, G86, both obsolete and G740 Cherry® power riveters. Will fit on the G784 and G689 hydro-shift Cherry® riveters with the 680B57 adapter. For the 1/4" Cherrylock "A" rivets. 8 Diameter......P/N 12-03131



CHERRYMAX STRAIGHT **PULLING HEAD H846A-456**

This pulling head installs 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets (G744 only)P/N 12-03103



CHERRYMAX RIGHT ANGLE **PULLING HEAD H828-8**

CherryMAX Right Angle Pulling Head installs 1/4" Nominal & Oversize CherryMAX Rivets (G744 only)P/N 12-03096



CHERRYMAX OFFSET **PULLING HEAD H827-8**

CherryMAX Offset Pulling Head installs 1/4" Nominal & Oversize CherryMAX Rivets (G744 only)P/N 12-03093

CHERRYLOCK® RIGHT ANGLE PULLING HEADS H886



The H886 series right angle s fit directly on the G701A, G704B, G746A and G747 power riveters to install CherryLOCK® 'A' brand rivets in 3/32". 1/8". 5/32" and 3/16" diameters in all materials, head styles and up to -04 grip length.

H886-3	P/N 12-03113
H886-4	P/N 12-03114
H886-5	P/N 12-03115
H886-6	P/N 12-03116



OFFSET LOCKBOLT **PULLING HEADS H562-6B/8B**

The H562 series pulling heads. Requires adapter (744-100) when used on the Cherry G84 tool.

-6	Diameter	3/16"	P/N	12-03059
-8	Diameter	1/4"	P/N	12-03060

CHERRY PULLING HEADS

CHERRY PULLING HEAD H1900-456

COMPACT UNIVERSAL STRAIGHT PULLING HEAD H800

Compact Universal Straight Pulling Head for G800 riveter. Weight - 0.15 lbs.......P/N 12-03092

SHORT PINTAIL BASIC PULLING HEAD H513

Cherry Short Pintail Basic Pulling Head H513 - See Tool Specifications below to determine which pulling head is needed.

	Parring resident				
Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price	
H513-04-20	1/8"	2" (51 mm)	12-03020		
H513-04-35	1/8"	3-1/2" (89 mm)	12-03021		
H513-05-35	5/32"	3-1/2" (89 mm)	12-03022		
H513-06-20	3/16"	2" (51 mm)	12-03023		
H513-06-60	3/16"	6" (152 mm)	12-03024		
H513-08-35	1/4"	3-1/2" (89 mm)	12-03025		

SWIVEL NOSE PULLING HEAD H513S

Cherry Swivel Nose Pulling Head H513S - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513S-05-20	2" (51 mm)	5/32"	12-03026	
H513S-05-35	3-1/2" (89 mm)	5/32"	12-03027	
H513S-06-20	2" (51 mm)	3/16"	12-03028	
H513S-06-24	2-3/8" (60 mm)	3/16"	12-03029	
H513S-06-35	3-1/2" (89 mm)	3/16"	12-03030	
H513S-06-48	4-13/16" (122 mm)	3/16"	12-03031	
H513S-08-24	2-3/8" (60 mm)	1/4"	12-03032	
H513S-08-35	3-1/2" (89 mm)	1/4"	12-03033	
H513S-08-48	4-13/16" (122 mm)	1/4"	12-03034	
H513S-10-27	2-11/16" (68 mm)	5/16"	12-03035	
H513S-10-42	4-3/16" (106 mm)	5/16"	12-03036	
H513S-12-27	2-11/16" (68 mm)	3/8"	12-03037	
H513S-12-42	4-3/16" (106 mm)	3/8"	12-03038	

SELF RELEASING SWIVEL NOSE PULLING HEAD H513SR

Cherry Self Releasing Swivel Nose Pulling Head H513SR - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513SR-05-20	2" (51 mm)	5/32"	12-03039	
H513SR-05-35	3-1/2" (89 mm)	5/32"	12-03040	
H513SR-06-20	2" (51 mm)	3/16"	12-03044	
H513SR-06-24	2-3/8" (60 mm)	3/16"	12-03045	
H513SR-06-35	3-1/2" (89 mm)	3/16"	12-03046	
H513SR-06-48	4-13/16" (122 mm)	3/16"	12-03047	
H513SR-08-24	2-3/8" (60 mm)	1/4"	12-03048	
H513SR-08-48	4-13/16" (122 mm)	1/4"	12-03049	
H513SR-10-27	2-11/16" (68 mm)	5/16"	12-03050	
H513SR-10-42	4-3/16" (106 mm)	5/16"	12-03051	
H513SR-12-27	2-11/16" (68 mm)	3/8"	12-03052	
H513SR-12-42	4-3/16" (106 mm)	3/8"	12-03053	

SELF RELEASING SWIVEL NOSE/ CHISEL SHAPE PULLING HEAD H513SRC

Cherry Self Releasing Swivel Nose/Chisel Shape Pulling Head H513SRC - See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	LockBolt Dia.	Installed Length	Part No.	Price
H513SRC-05-20	2" (51 mm)	5/32"	12-03054	
H513SRC-05-35	3-1/2" (89 mm)	5/32"	12-03055	
H513SRC-06-20	2" (51 mm)	3/16"	12-03056	
H513SRC-06-35	3-1/2" (89 mm)	3/16"	12-03057	
H513SRC-08-48	4-13/16" (122 mm)	1/4"	12-03058	

CHERRYLOCK "A" CODE PULLING HEAD H84-8CLA

Cherrylock "A" Code Pulling Head for use with G84 riveters. Tool weight (without riveter): .3 lbs (0.14 kg).P/N 12-03104



OFFSET LOCKBOLT/ SHORT PINTAIL PULLING HEAD H563SP

See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	Туре	LockBolt Dia.	Part No.	Price
H563SP-4B	Basic Pulling/Short Pintail	1/8"	12-03064	
H563SP-5B	Basic Pulling/Short Pintail	5/32"	12-03065	
H563SP-6B	Basic Pulling/Short Pintail	3/16"	12-03066	

CHERRYLOCK® STRAIGHT PULLING HEAD H681



Fits directly on all Cherry hydroshift riveters, 2-9/16" installed. Separate pulling head is required for each style & diameter rivet.

Description		A/B Dims.		
H681-3C Universal C-Sunk Head	3/32"	.163"/.332"	12-03070	
H681-4C Universal C-Sunk Head	1/8"	.208"/.341"	12-03071	
H681-4F Countersunk Head 156	1/8"	.430"/.358"	12-03072	
H681-4S Countersunk Head NAS 1097	1/8"	.174"/.341"	12-03073	
H681-5C Universal C-Sunk Head	5/32"	.269"/.352"	12-03074	
H681-6C Universal C-Sunk Head	3/16"	.335"/.386"	12-03075	
H681-6F Countersunk Head 156	3/16"	.625"/.367"	12-03076	
H681-6S Countersunk Head NAS 1097	3/16"	.281"/.386"	12-03077	
H681-8C Universal C-Sunk Head	1/4"	.458"/.398"	12-03078	

CHERRYLOCK® STRAIGHT PULLING HEAD H681B



Fits directly on all Cherry hydroshift riveters, 2-9/16" installed. Separate pulling head is required for each style & diameter rivet.

Description	Rivet Dia.	A/B Dims.	Part No.	Price
H681B166-4 Uni-Sink Head	1/8"	.250" / .359"	12-03079	
H681B166-5 Uni-Sink Head	5/32"	.313" / .377"	12-03080	
H681B166-6 Uni-Sink Head	3/16"	.375" / .419"	12-03081	

CHERRYMAX® STRAIGHT PULLING HEAD H701B-456



CherryMAX Straight Pulling Head H701B-456 - Installs 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets.

P/N 12-03083

NUT PLATE PULLING HEAD WITH NOSEPIECES H702-3NPR



Cherry® Nut Plate Pulling Head. Includes nosepieces: 728A9-3 (3/32"") & 728A9-104 (1/8""). For G702A Riveter. Installs 3/32" & 1/8, 2.5 mm & 3 mm Nut Plate.

P/N 12-03084

CHERRYMAX STRAIGHT PULLING HEAD H744A-8



CherryMAX Straight Pulling Head installs 1/4" Nominal & Oversize CherryMAX Rivets (G744 Only)......P/N 12-03087

CHERRYMAX RIGHT ANGLE PULLING HEAD H753A-456

CherryMAX Right Angle Pulling Head H753A-456 installs 1/8", 5/32" & 3/16" Nominal & Oversize CherryMAX Rivets P/N 12-03089

CHERRYMAX OFFSET PULLING HEAD H781-456



OFFSET LOCKBOLT PULLING HEAD H563

See Tool Specifications below to determine which pulling head is needed.

Cherry P/N	Type	LockBolt Dia.	Part No.	Price
H563-4B	Basic Pulling	1/8"	12-03061	
H563-5B	Basic Pulling	5/32"	12-03062	-
H563-6B	Basic Pulling	3/16"	12-03063	

STRAIGHT PULLING HEAD -8 CHERRYMAX® H84A-8

Straight pulling head H84A-8 for use with G84 Power Riveter and G84-LS Split Power Riveter (with adaptor 744-700). Pulling Head Weight: 0.2 lbs (0.09 kg).......P/N 12-03106

CHERRY 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. 3/16" dia.), one of which is stored securely out of the way in the riveterP/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 pre-

vents the 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 toolP/N 12-03105



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. 20 Hole spacerP/N 12-11700

10 Hole spacerP/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. Able to set any standard blind rivet up to 3/16" aluminum. (For cordless electric power drills, a minimum 12V battery is recommended.) Nosepieces for 1/8", 5/32", & 3/16" sizes are included.....P/N 12-00253

ULTRALIGHT NUTPLATE DRILL MOTOR



Ergonomic, lightweight design. Only one hand required to locate, drill & countersink both holes. Easily convert rivet spacings with interchange-able foot attachments. Accomodates all nutplate spindle spacings from 0.219" to 1.125". Fully adjustable feed rate. P/N 12-01376

THREAD SELF-COILING AIR/VACUUM HOSE



This 25 ft. air vacuum hose snaps back to a compact 20" coil for easy storage. Includes non-corrosive brass male fittings. Excellent for air tools using a compressor. 100 PSI working pressure. Oil resistant polyurethane construction High visibility color. 1/4" NPT air inlet....P/N 12-00218

RED BOX 737 RIVET GUN KIT



Includes: 1pc Rivet Gun (choose size 2X, 3X or 4X), 1pc Type A -Bucking Bar, 1pc Type B -Bucking Bar, 1pc Brass Regulator, 1pc Air Tool Fitting, 4pcs 3.5" Straight Rivet Set (3/32", 1/8" 5/32", 3/16"), 1pc Standard Flush Set (Surface: 1", Length: 2.5"), 1pc Beehive Spring, 1pc Retainer Spring, 1pc Marvel Air Tool Oil

Gun	Length	BPM	Cap.	Bore	Shank	Stroke	Weight	Part No.	Price
2X	6-11/16"	2580	1/8"	1/2"	.401"	2-1/4"	3. lbs	12-02682	
3X	7-5/16"	2160	3/16"	1/2"	.401"	2-7/8"	3.2 lbs.	12-02686	
4X	8-1/2"	1740	1/4"	1/2"	.401"	3-1/16"	3.4 lbs.	12-02687	

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 then 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 rubberstrip coated along edges of tape only and tack-free center Window.......P/N 12-18355

COMBINATION RIVET NUT TOOL



Ideally suited to the needs of the aircraft homebuilder.

Ideally suited to the needs of the aircraft homebuilder.

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. Quickly converts to a threaded blind nut setter. The kit includes the D100 hydraulic tool with adapters for blind rivet and blind nut installation, the properties of the 1/8" 5/3" and 3/16" diameter blind rivet a blind nut. 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 12-01136 Kit

PNEUMATIC-HYDRAULIC BLIND 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. Can install CherryMax rivets. It utilizes a patented two-valve hydraulic pump actuated by 90 to 130 PSIG air pressure. 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

RED BOX 777 RIVET GUN KIT

Includes: • 1pc Rivet Gun (Choose Size 2X, 3X or 4X) • 1pc Type A -Bucking Bar • 1pc Type B -Bucking Bar • 1pc Type C -Bucking Bar • 1pc Type D -Bucking Bar • 1pc Brass Regulator • 1pc Air Tool Fitting • 4pcs 3.5" Straight Rivet Set(3/32",1/8",5/32",3/16") • 4pcs 3.5" Offset Rivet Set(3/32",1/8",5/32",3/16") • 1pc Standard Flush Set (Surface: 1", Length: 2 1/2") • 1pc Flush Set w/ Rubber

(Surface:1 1/4",Length:2 3/8") • 1pc Beehive Spring • 1pc Retainer Spring • 1pc Marvel Air Tool Oil

2X Rivet Gun Kit	P/N 12-03726
3X Rivet Gun Kit	P/N 12-03727
4X Rivet Gun Kit	P/N 12-03728

2100lbs. of force the tool has the best weight to power ratio in the industry, boasting 2100lbs of pulling force. It can set 1/8,5/32 and 3/16 rivets in all Alloys. Super light weight and small, allowing the rivet gun to fit in the tightest of spaces. Convenient, thumb-operated on/off vaccum control switch to control compressor air consumption.

Comes complete with nose tips for 1/8, 5/32 and 3/16,. Also included

are wrenches for service and oil applicator. Recommended operating air pressure is 80-95 PSI. Weight 3.2 lbsP/N 12-03384

BLUE PNEUMATIC RIVETING TOOL BP-4V

3500lbs of pulling force. Can set 1/8,5/32, 3/16 and 1/4 rivets in all Alloys. Super light weight, allowing the rivet gun to be operated continually with great comfort. Convenient, thumb-operated on/off vaccum control switch to control compressor air consumption. Complete with nose tips for 1/8, 5/32, 3/16 and 1/4. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 80-95 PSI. Weight 3.6 lbs. P/N 12-03385



BLUE PNEUMATIC COMPACT **HEAVY DUTY RIVETER BP-54**

The power of the large "heavy duty" riveters in the body of a small one. Sets 3/32, 1/8, 5/32 and 3/16 rivets in all materials. Ideal for multi-grip rivets and pulls 3/16 Monobolt/Magna-lok structural rivets. Nose pieces and service wrenches are included. Recommended operating air pressure is 85-100 PSI. Weight 4 lbs.

Without VacuumP/N 12-03386 With VacuumP/N 12-03429



BLUE PNEUMATIC HEAVY DUTY AIR /HYDRAULIC RIVETER BP-50

3800lbs. of force. Sets rivets from 1/8 through 1/4 in all materials. Its 7/8 stroke allows this rivet tool to pull most structural rivets in one stroke. Great for high production applications. Comes with nose pieces including 1/8, 5/32,

3/16 and 1/4. Also included are wrenches for service and oil applicator. Recommended operating air pressure is 85-100 PSI. Weight 5 lbs.

P/N 12-03387



BLUE PNEUMATIC POWER MICRO BLIND RIVET GUN BP-48V

Installs 3/32, 1/8 and 5/32 blind rivets in all materials. This rivet tool weighs in at 2.4 lbs and has 1760 lbs. of pulling force. The rivet gun comes with a vaccum powered mandrel collection system. Also included are wrenches

for service and oil applicator. Recommended operation pressure 85-100 PSI. Weight 2.4 lbs......P/N 12-03388

BLUE PNEUMATIC AIR HYDRAULIC RIVETER WITH VACUUM BP-50V



3800lbs. of force. Sets rivets from 1/8 through 1/4 in all materials. Its 7/8 stroke allows this rivet tool to pull most structural rivets in one stroke. Great for high production applications. Rivet tool comes with nose pieces including 1/8, 5/32, 3/16 and 1/4. Also included are wrenches for

service and oil applicator. Recommended operating air pressure is 85-100 PSI. Weight 5 lbs.P/N 12-03430

BLUE PNEUMATIC BIG SPIN RIVET NUT TOOL BP-200BC Now with a swiveling air inlet and ergonomic composite handle. Operates at 200 rpm for installations of the large

rivet nuts. Places 1/2-13 and M12. Recommended operating air pressure is 85-110 PSI. Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16......P/N 12-03431......**2.95**



BLUE PNEUMATIC HEAVY DUTY LEVER RIVET NUT TOOLS

HEAVY DUTY LEVER RIVET NUT TOOL BP-734: • Heavy Duty Lever Rivet Nut Tool • Comfortable easy grip handle · Long handles for easy rivet nut and nutsert installations. · Includes M5, M6, M8 and M10 Nose Assemblies......P/N 12-03501

HEAVY DUTY LEVER RIVET NUT TOOL BP-734S: · Heavy Duty Lever Rivet Nut Tool • Comfortable easy grip handle • Long handles for easy rivet nut and nutsert installations • Includes 10-24, 1/4-20, 5/16-18 and 3/8-16 Nose Assemblies......P/N 12-03502

HEAVY DUTY LEVER RIVETER BP-764: • Up to 1/4 steel • Heavy Duty Lever Rivet Tool · Comfortable easy grip handle · Rivet tool comes with nose pieces including 1/8, 5/32, 3/16 and 1/4

P/N 12-03503

BLUE PNEUMATIC COMPACT HEAVY DUTY RIVETER BP-54

Sets 3/32, 1/8, 5/32 and 3/16 rivets in all materials. Ideal for multi-grip rivets and pulls 3/16 Monobolt/Magna-lok structural rivets. Nose pieces and service wrenches are included. Recommended operating air pressure is 85-100 PSI. WeightP/N 12-03432 4 lbs.....



BLUE PNEUMATIC ACCU-SPIN RIVET NUT TOOL BP-600QC Swiveling air inlet and ergonomic composite handle. Operates at 800 rpm for quick installations of smaller rivet

nuts. Places 8-32, 10-24, 1/4-20 and M4, M5, and M6 rivet nuts. Recommended operating air pressure is 85-110 PSI. Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16.

P/N 12-03433



BLUE PNEUMATIC QUICK SPIN RIVET NUT TOOL BP-2000QC

Swiveling air inlet and ergonomic composite handle Operates at 1600 rpm for quick installations of smaller rivet nuts. Places 6-32, 8-32, 10-24 and M3, M4, as well as Jacknuts. Recommended operating air pressure is 85-110 PSI.

Weight 2.8 lbs. Part includes nose assembly, make selection at time of order. Nose assembly sizes: 632, 832, 1024, 1/4-20, 5/16-18, 3/8-16.

P/N 12-03434



BLUE PNEUMATIC SPIN PULL SPIN ULTRA RIVET NUT TOOL BP-60

SPIN-PULL-SPIN setting sequence. In one touch the fastener quickly spins on, pulls the fastener, and with the release button, spins out of the fastener. Setting cycle is about 2 seconds. Fully adjustable stroke for accurate insert placements. Mandrels are included with tool. Comes complete with sizes

8-32 through 1/2-13 or M4 through M12. "More Power" means this tool uses its huge 6800 lbs. of pulling force to set up to 1/2 (M12) steel rivet nuts with ease. Recommended operating air pressure is 80-100 PSI. Weight 6 lbs.

Metric.....P/N 12-03505



BLUE PNEUMATIC CORDLESS RIVETER BP-20CR

The Blue Pneumatic BP-20CR 1/4" Blind Rivet Tool is an ultra-fast cordless rivet tool. It eliminates the need for air hoses and compressors and is built to last. The brushless motor makes this tool very durable, lasting many times longer

than other rivet tools. With an industry leading 27mm (1 1/16 in) stroke, it pulls rivets in just one stroke. This tool is ideal for production environments as it has a sturdy outer composite body and requires just about no maintenance. BP-20CR's Brushless Motor delivers 4,496 lbs. (20kN) of pulling force for high-strength Structural blind rivets in all materials. This rivet tool pulls rivets ranging from 1/8 up to 1/4" in all /materials P/N 12-05561

BLUE PNEUMATIC HAND TOOL BP-738



Rivet Nut Hand Tool BP-738. StandardP/N 12-03437 Metric......P/N 12-05433



BLUE PNEUMATIC RIVET NUT TOOL W/MANDRELS BP-738M

Hand tool with mandrels. Includes Mandrel sizes 6-32,8-32,10-24 and 1/4-20.

P/N 12-03440



BLUE PNEUMATIC R AND D HAND TOOL KIT BP-738K

BP-738 Hand Tool. Mandrels including 6-32, 8-32, 10-24, and 1/4-20. Also includes 40 total pcs of assorted rivet nuts that match included mandrels. Comes in molded plastic case (Private labeling available) P/N 12-03441

BLUE PNEUMATIC NOSE ASSEMBLY FOR SPIN-SPIN RIVET NUT TOOLS



Quick change nose assembly. Available in 6-32 through 3/8-16. Spin-Spin tools use replaceable socket head cap screw. 3/8 air hose recommended for optimal performance.

Description	Part No.	Price
Blue Pneumatic BPQ-632 Nose Assembly	12-03442	
Blue Pneumatic BPQ-832 Nose Assembly	12-03443	-
Blue Pneumatic BPQ-1024 Nose Assembly	12-03444	
Blue Pneumatic BPQ-1/4-20 Nose Assembly	12-03445	
Blue Pneumatic BPQ-5/16-18 Nose Assembly	12-03446	
Blue Pneumatic BPQ-3/8-16 Nose Assembly	12-03447	

.-6000 RIVET NUT 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 Rivet Nuts with the following thread sizes:

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

CONVERSION KIT - For changing speed header to a different Rivet Nut 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



C-845 ECONOMY RIVET NUT TOOL

Model L-845 wrench type Rivet Nut 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: 6-32P/N 12-134008-32 P/N 12-13500

10-24P/N 12-13600 10-32 P/N 12-13700 1/4-20P/N 12-13800 1/4-28 P/N 12-13900



L722 WRENCH TYPE RIVET NUT TOOL

L722 Wrench Type Rivet 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.

Description	Part No.	Price
Wrench Type Header 5/16-18	12-00920	
Wrench Type Header 3/8-16	12-00922	
Wrench Type Header 1/2-13	12-00927	
Wrench Type Header M10	12-00930	
Wrench Type Header 5/16-24	12-00921	
Wrench Type Header 3/8-24	12-00926	
Wrench Type Header 1/2-20	12-00928	

L-1000 ECONOMY HAND RIVET NUT TOOL



The L-1000 economy hand Rivet Nut 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-1000M	(M6)	12-13675	

BLIND RIVET REMOVAL TOOL



This rivet removal tool allows you to remove those stubborn Pop, Avdel, Cherry-Q, and other

blind rivets. The serrated nosepiece fits over any button head, round head, or universal head rivet and locks in place to keep it from spinning as it's being drilled out. It will also remove solid rivets. Includes adapters to remove 3/32", 1/8", 5/32", and 3/16" rivets.

Note: Not for use with steel rivets

RedP/N 12-03368 BlueP/N 12-05534

RIV-NUT PULLERS



The Riv-Nut Puller was designed for installation of steel and aluminum rivet-nuts. High speed, push-pull action. Available in sizes 6/32, 8/32, and 10/32.

Rivet Nut Puller 6-32	. P/N 12-02886
Rivet Nut Puller 8-32	. P/N 12-02887
Rivet Nut Puller 10-32	. P/N 12-02888
Rivet Nut Puller Conversion Kit 8-32	. P-N 12-02880
Rivet Nut Puller Conversion Kit 10-32	. P/N 12-02881
Rivet Nut Puller 6-32 w- 2 Conversion KitS	. P/N 12-02885
Rivet Nut Stem Replacement 6-32	. P/N 12-02889
Rivet Nut Stem Replacement 8-32	. P/N 12-02890
Rivet Nut Stem Replacement 10-32	. P/N 12-02891
Rivet Nut Puller Conversion Kit 8-32	. P/N 12-02880
Rivet Nut Puller Conversion Kit 10-32	. P/N 12-02881
Rivet Nut Puller 6-32 w- 2 Conversion Kit	. P/N 12-02885

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

LUFKIN METRIC/INCH TAPE MEASURE



LUFKIN NO. W921OME 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

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



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. Powered by any 9V battery.
Smart Tool in 24" rail.......P/N 12-21365

INSTANT MAGNETIC ANGLE FINDER



Measuring angles is a snap with Johnson's magnetic angle locator. It features a high-impact molded body and an extrastrong ceramic magnet that sticks to ferrous metal surfaces, while the v-groove edges fit perfectly onto pipe and conduit. Easy to read increments show 0-90° in all four quadrants on

the durable acrylic lens, and the sides are marked with length graduations for convenience - one leg shows inch graduations while the other leg shows metric graduations.....P/N 12-14800

DIGITAL PROTRACTOR/LEVEL ND-81



Full 360-degree measuring range with maximum resolution and accuracy of 0.1 degree. Simple 30 second calibration procedure using only the top flat edge of a table or desk. Alternate zero button to set zero starting

point at any angle (commonly used for aileron, flap and elevator rigging). Display hold button to freeze reading when measuring in tight spaces. Readout stays upright even when protractor is upside down.

P/N 12-02651

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 stateof-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

ATS-360 DIGITAL PROTRACTOR



It provides absolute measurement as well as relative measurement. 2.75" wide by 1.50" high LCD screen. Can convert between angles and slopes; Accurate to within .05 degreesP/N 12-04967

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

PLASTIC WEDGE PULLER TOOL - The forked tip. The original for removing door panels and plastic grommets. Set of 4 listed above.





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-GNL	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: • Flexible • Slick surface for ease of prying • Built-in handle · Non-marring surface · Slim powerful angle
Multi Wedge Set Black (Hard) 3500P/N 12-01672
Two Multi Wedge Sets - Orange (Soft) / Black (Hard) 3400/3500

P/N 12-01673

SEALANT CUTTERS



Sealant cutter quickly and safely removes thick applications of seam sealant for aircraft maintenance and repair. Eliminates the need for harsh chemicals. Saves time and effort. 1/4" x 28 Threaded Shank.

.40" Diameter......P/N 12-02879 .83" Diameter......P/N 12-02878

CSR-10 COMPOSITE SEALANT REMOVER



CSR is made from durable Torlon® material that can remove sealant in many applications at a lower product cost with greater efficiency and productivity. For aerospace applications, CSR is safe to use on common protective coatings and structural materials.

CSR series can be used with 1/4"-28 UNF, 1/4" collet, and drill chuck interfaces. Screw in or attach/lock into rotary tool.

CSR cuts by rotating in the clockwise direction. Operate the CSR at 200-400 RPM for better controllability while avoiding heat buildup. Heat will accelerate wear on the CSR and may generate undesirable odor from the sealant. For general applications, use the CSR-10 to engage an edge of the sealant and allow the rotating action to cut through at the bond line. Specifications: • Diameter: 1" • 1/4"-28 UNFP/N 13-23407

BOJO STRONG 90MM WIDE SCRAPERS

3" (90mm) Wide Edge Scraper Tool Extreme or CELCON Material ITH handle.

ExtremeP/N 12-04766 CelconP/N 12-04768

BOJO EXTREME EDGE SCRAPERS

Composite Angle or Concentrated Extreme Edge Scraper Tools. Angle: for Sharp edges & corners. Concentrated: for scraping power into small regions.

2 PIECE LONG AND NARROW PRY TOOL KIT

Includes: • 1 - For wedging & splitting deep into narrow locations. (Flat tip) • 1 - For prying in narrow and deep locations. (Pry tip)......P/N 12-04771

BOJO COMPOSITE ANGLED PUSH/ PULL EXTREME SCRAPERS

Includes: • 1 - Composite Angled Push/Pull Extreme Scraper • 1 - Composite Flat Push/Push Extreme Edge Scraper.....P/N 12-04772



BOJO SCRAPER EDGE

Narrow Edge Scraper Edge Scraper (1/4" Wide) P/N 12-04773



BOJO SCRAPER 3MM WIDE

Narrow Edge Scraper Edge Scraper (1/8" Wide). P/N 12-04774



BOJO 3 PIECE SMOOTHING KIT WITH POUCH Sealant Smoothing Tool Kit "Extreme". Includes all three

Bojo smoothing tools and vinyl pouch. Bojo Tools now offer a comprehensive range of sealant smoothing tools to complement the scraper systems supplied for aerospace, automotive and general industrial applications. Industry standard profiles and unique Bojo designed tips ensure economical, consistent and aesthetic application of all standard sealant types......P/N 12-04775

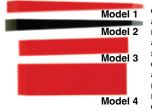


SCRAPERITE BLADES

Scraperite® double-edged plastic blades and one holder. This original patented double-edged design is best for corner access and straight line scraping. It is the workhorse of the line, the blade series that helped build the brand and remains a key tool in many applications. These blades naturally lift dirt up and away without picking up germs and can be easily wiped with a disposable cloth after each stroke, unlike scrubbing pads and sponges that collect dirt with every pass. The Orange General Purpose (GPO) blade is a forgiving

material soft enough to be used on most soft surfaces like other plastics, thanks to its natural lubricity and pliability. It also has good resistance to household and industrial chemicals making a great all-around blade for general use around the home or workplace. This resistance to chemicals makes it ideal for removing decals with chemicals like acetone used to quickly break down the acrylic adhesives. This material is approved by Alcoa and Boeing for use on aircraft alloys. Orange (General Use) - 5 Pack......P/N 12-05564

SEALANT REMOVAL TOOLS



These tools are full machined and/ or laser cut, which helps them retain a sharp edge. The tools are used by many defense contractors and Naval air stations for sealant application, sealant removal, paint removal, acrylic canopy contact, and general use. They are made from cell cast acrylic or black nylon as noteed. These tools can be resharpened on an abrasive belt or disc. Note: 15% Discount on 12 or more (Per P/N)

Model	Material	Part No.	Price
Model 1	Acrylic	12-02360	
Model 2	Nylon	12-02361	
Model 3	Acrylic	12-02362	
Model 4	Acrylic	12-02363	

OOL

MULTI-PURPOSE SCRAPER



This Muli-purpose scraper has a 2 1/4" wide blade ideal for more coverage. This scraper is ideal for lighter duty jobs. It has a blade cover for safety and a hole in the handle to hang for convenience.

This scraper is disposable and does not have replacement blades availableP/N 12-02371



OLFA MULTI-GRIP SCRAPER

The PP resin provides enhanced durability and high acetone-resistance. Handle is kept as thin as possible; its thickest part is only 7mm-thick. 4-3/4" Stainless steel blade is perfect for use with dishwashing liquid or dish bleach. Blade exchange needs no special tools.

.....P/N 12-04886 Scraper..... Replacement Blades (30 Pack)......P/N 12-04887



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
* UNF - Unified Fine Thread

- **UNC = United Coarse Thread
- *** Metric = Metric & Spark Plug (ISO)

Kit Part No.	Size	Inserts per kit	Price
33004**	UNC Range Kit	50	
34004*	UNF Range Kit	50	
33058**	UNC Range Kit	15	
34608*	UNF Range Kit	15	
34048*	UNF Range Kit	15	
34058*	UNF Range Kit	15	
34068*	UNF Range Kit	15	
34078*	UNF Range Kit	10	
34088*	UNF Range Kit	10	
35068***	M6X1	15	
35088***	M8X1.25	15	

1/4 INCH FEMALE QUICK COUPLER



Merlin™ air tool plugs deliver longer life and higher performance. This I/M Series Female Plug is constructed of durable steel and fits 1/4 in. couplers. The Industrial plug is rated at a maximum of 300 PSI of air pressure to power your pneumaticP/N 12-05183



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

ALL-SHARP DIAMOND SHARPENER

LargeP/N 12-30170

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.



6-IN-1 COMBINATION **SCREWDRIVER**

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



HOBBY KNIFE SET

Ideal for professionals, DIYers and hobbyists. Applications include precision woodworking, graphic design, wallpapering and carpeting. 18 piece setP/N 12-04746

PROP NUT TORQUE ADAPTOR WRENCHES



Drive	Socket	Length	Material	Part No.	Price
1/2"	9/16"	9"	Steel	12-06276	
1/2"	5/8"	9"	Steel	12-06277	
1/2"	11/16"	9"	Steel	12-06278	
1/2"	3/4"	9"	Steel	12-06279	
1/2"	13/16"	9"	Steel	12-06280	
1/2"	7/8"	9"	Steel	12-06281	



COAX CABLE CRIMPING TOOL

This 12 point, full ratchet crimping tool terminates precision BNC connectors in size RG 55,58,59,62,141,142,223,303 and 400. This crimper is built to MS22520 specifications and die set is included with the crimper. Specifications: Cable Groups: RG

55/58/59/62/141/142/223/303/400......P/N 12-02378

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

ATS ESD SAFE WIRE NIPPERS WITH FOD CLIP

These wire nippers have hardened jaws to cut up to 12 AWG copper wires without dulling. Plus it has a FOD catching clip that will hold the shipped ends of wires before they can fly off and become a safety hazard. It's also ESD save, which means that it will not hold a static charge, thus eliminating any chance of accidentally zapping your delicate electronics with static electricity. Convenient spring-loaded handles makes it easy to do one-handed work in confined areasP/N 12-05445

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 applicationsP/N 12-01627

Replacement Plier Pads......P/N 12-01425



WIRE MARKING TOOL

Ever been on your back looking up at a bunch of white wires or in a really tight space where only your arms and shoulders would fit and wonder, "how am I going to tell the difference between all of these wires?"

this wire marking tool will allow you to do just that.

The wire marking tool works on wire from 24 ga to 8 ga. This tool is perfect for every mechanic and do it yourselfer. Mark just one wire or all of your wires before you start or while installing in just seconds. 4 and 12 pack of markers sold separately.

.....P/N 12-02497 Wire Marking Tool ...

4 pack colors: Black, Blue, Red, Green, Red, Orange, Yellow, Purple, Brown, Turquoise, Lime, Berry, & AquaP/N 12-02503

POWER PRECISION SCREWDRIVER

General's Cordless Power Precision Screwdriver is ideal for ultra-delicate applications such as computer and electronics repair, hobbies and crafts. The 100+ RPM motor features forward and reverse controls, and the quick-change chuck allows for effortless swapping between 1/8" Slotted, Phillips and Torx bits. **Features**: • Cordless Precision Screwdriver (2 "AAA" alkaline batteries included) • 10+ hours of power • 100+ RPM motor with forward and reverse controls • Super-torque drive Quick-change chuck • Ergonomic design allows for various comfortable grips • Precision bit assortment (1/8" drive) • Phillips: #00, #0 • Slotted: 1/16", Ĭ/8" • Torx: T5, T6......P/N 12-02308



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,

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 drive with wrench. • Use standard Phillips or Slotted insert bits • Rivet gun required. Note: Does not include TipsP/N 12-00827

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 BUILDER KIT COMPONENTS

Part No.	Description	
12-02004	2x Rivet Gun	
12-00869	Avery Pnuematic 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"	
12-00873	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	
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	3m™ 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	
12-00631	Avery Shop Hd Rivet Gauge Set	
12-00633	Avery Rivet Length Gauge	
12-00622	Avery Speed Deburr-Csink Tool	
12-02547	Avery Royal Multi-Burr Tool	
12-00629	Avery Double Edge Deburr Tool	
12-00875	7a Deburring Wheel - Medium Grade	
12-00870	Avery 3/32" Drive Pin Punch	
12-00871	Avery 1/8" Drive Pin Punch	
12-00889	Avery 360deg Swivel Pop Rvt TI	
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.

P/N 12-01145

Part No.	Pcs.	Description	Part No.	Pcs.	Description
02-R18C-12	3	Jobber's Length	07-20-4706	1	Offset Rivet Set,
02-R18C-28	3	Drill	07-20-500	1	3-1/2" O.A.L.
02-306-21	1	Integral Pilot	07-91	1	Mushroom Rivet Set
02-306-30	1	Cutter	08-112	1	
02-306-40	1	Outto	08-638	1	
02-441	1	Countersink Cage	08-647	1	Bucking Bar
04-M-1/8	175	'M' Type Fastener	08-670	1	
04-M-3/32	325	* '	09-RH-2	1	Handi Retainer Spring
04-1120	1	Fluting Plier			Hand Rivet Squeezer,
04-17	1	Rivet Cutter	10-420-2A	1	2" Yoke
02-22022	1	Multi-Burr w/5 Blades	17-3XSP	1	USATCO Rivet Gun
04-62	1	Cleco Plier	26-200-4703	1	
07-10-4703	1		26-200-4704	1	Cupped Squeezer Set
07-10-4704	1	Rivet Set,	26-200-4705		Cappou oquoozo: oo:
07-10-4705	1	3-1/2" O.A.L.	26-210	2	Flush Causassa Cat
07-10-4706	1				Flush Squeezer Set
07-10-500	1	Flush Set,	4263PDSB	1	Spring Back
07-10-300		3-1/2" O.A.L.	4264PDSB	1	Punch &Die
07-20-4703	1	Offset Rivet Set.	62-54404	1	Plastic Kit Box
07-20-4704	1	3-1/2" O.A.L.	JSM-705	1	3/8" Reversible Air Drill
07-20-4705	1	0 1/2 O.A.L.	TP44	1	Hand Seamer

RV BUILDERS STARTER KITS



This scaled down version of this RV Builder's Kit contains just the tools you need to get your feet wet with sheet metal construction. The kit closely follows the recommended tools list from Van's RV TRAINING PROJECT-1 and their TOOL BOX KIT projects. This kit is also the minimum recommended set of

tools to build the empennage (tail) section of the RV3, RV4, RV7, RV8, RV9, and RV10 series of home built airplanes. Start out with this kit, and when you're ready to do more advanced work, get the upgrade package to take you all the way up to the full RV Builder's Tool Kit.

Description	Part No.	Price
Starter Kit W/ 3x Rivet Gun	12-04850	
Starter Kit W/ Pro 2x Rivet Gun	12-04851	
Starter Kit W/ Pro 3x Rivet Gun	12-04852	
Starter Kit Upgrade Package	12-04853	

RV-12 QUICKBUILD TOOL KIT



This kit contains all the tools you need to build Van's exciting RV-12 Quickbuild Kit. The RV-12 has become an instant favorite of Light Sport Aviation (LSA) kitplanes because it's so remarkably easy to assemble. It requires virtually no sheet metal skills, and needs little more than a few hand tools. We've made your

task even easier by bringing together all the tools you'll need into one complete kit, and priced it to be easy on your wallet. This kit is based on Van's recommended tool list, as well as recommendations from custom-.....P/N 12-04849



RV BUILDERS KITS
The RV Builder's Kit has been completely revised to conform to Van's recommended tool list for their very popular line of RV homebuilt airplanes. It contains all of the aviation tools and equipment needed to successfully assemble Van's Aircraft RV-3/3B, RV-4, RV-6/6A, RV-8/8A, RV-9/9A, and the newer

RV-7/7A and RV-10 series homebuilt airplanes. It's also an excellent toolkit to assemble the Murphy family of kitplanes, including the Rebel, Elite, Maverick, and Super Rebel; The Precision Aero Mustang S-51D; The Skystar Kitfox; and any other metal airplane.

Description	Part No.	Price
RV Builders Kit W/ Econ 3x Rivet Gun	12-04854	
RV Builders Kit W/ Pro 2x Rivet Gun	12-04855	
RV Builders Kit W/ Pro 3x Rivet Gun	12-04856	

MASTER KIT BUILDERS KIT



The Master Kit Builders Kit (TP176MKB) conthe Master Kit Builders Kit (1P176MKB) 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, but numbering the kit over the can be realized by purchasing this kit over the individual tool price. Wt. 50 lbsP/N 12-00832

Part No.	Pcs.	Description	Part No.	Pcs.	Description
02-R10C-1/4	1		08-112	1	
02-R18C-12	2	labbar'a Lamath Duill	08-638	1	Dualdan Dan
02-R18C-30	4	Jobber's Length Drill	08-647	1	Bucking Bar
02-R18C-40	6		08-670	1	
02-306-21	1		09-RH-2	1	Handi Retainer Spring
02-306-30	1	Integral Pilot Cutter	10-37001	1	POP Swivel Hand
02-306-40	1	•	10-37001	'	Riveter
02-441	1	Countersink Cage	10-420-2A	1	Hand Rivet Squeezer,
04-M-1/8	175	'M' Type Fastener		<u> </u>	2" Yoke
04-M-3/32	325	IVI Type I astellel	17-3XSP	1	USATCO Rivet Gun
04-1120	1	Fluting Plier	18-DS-1/4	1	
04-17	1	Rivet Cutter	18-DS-10	1	Drill Stop
02-22022	1	Multi-Burr w/5 Blades	18-DS-30	1	Dilli Stop
04-63	1	Cleco Plier w/Comfort	18-DS-40	1	
		Grips	26-200-4703	1	
07-10-4703	1_		26-200-4704	1	Cupped Squeezer Set
07-10-4704	1	Rivet Set, 3-1/2" O.A.L.	26-200-4705	1	
07-10-4705	1	Tilvet det, 0-1/2 O.A.L.	26-210	2	Flush Squeezer Set
07-10-4706	1_		4263PDSB	1	
07-170	1	Flush Mushroom	4264PDSB	1	Spring Back Punch! Die
		Set w/Guard	53-120	1	POP Dimple Tool
07-20-4703	1		53-70453	1	3 Piece Aviation Snip Set
07-20-4704	1	Offset Rivet Set, 3-1/2"	61-13551	1	Hole Cutter
07-20-4705	1	O.A.L.	62-54405	1	Plastic Kit Box
07-20-4706	1			1	
07-20-500	1	Marshara Birrat Cat	JSM-705	1	3/8" Reversible Air Drill
07-90	1	Mushroom Rivet Set	TP44		Hand Seamer



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.

P/N 12-01126

Part No.	Pcs.	Description	Part No.	Pcs.	Description
02-2962-21	1	Threaded Shank	07-20-4705	1	Offet Rivet Set, 3-1/2"
02-2962-30	1	Adapter Drill	07-20-4706	1	O.A.L.
02-2962-40	1	Adapter Dilli	07-20-500	1	Offset Flush Set
02-306-21	1		08-112	1	
02-306-30	1	Integral Pilot Cutter	08-638	1	Bucking Bar
02-306-40	1	_	08-647	1	Bucking bai
02-441	1	Countersink Cage	08-670	1	
02-1120	1	Fluting Plier	10-420-2A	1	Hand Rivet Squeezer,
04-200	1	Chip Chaser	10-420-2A		2" Yoke
04-5S	1	Hand Metal Punch Kit	149-1	1	Wrench (for Cone
04-501	1	Heavy-Duty			Jaw Chuck)
		Rivet Cutter	15-1580	1	Junior Air Vac
6-Apr	1	Nibbling Hand Tool	17-3XSP	1	Rivet Gun
Apr-62	1	Cleco Plier	18-DS-10	1	
04-EL-1/2-1	3	Side Grip Fastener	18-DS-21	1	Drill Stop
04-EL-1/2-1/2	2	Olde Grip i asteriei	18-DS-30	1	3 0.00
04-M-1/8	10		18-DS-40	1	
04-M-3/16	10	'M'Type Fastener	20-127-4S	1	90°Angle Drill Attachment
04-M-3/32	10	IVI Type I asterier	20-M3	1	Cone Jaw Chuck
04-M-5/32	10		26-200-4703	1]
04-WNX-1/8	5		26-200-4704	1	Cupped Squeezer Set
04-WNX-3/16	5	Mina Nut Footones	26-200-4705	1	
04-WNX-3/32	5	Wing Nut Fastener	26-210	1	Flush Squeezer Set
04-WNX-5/32	5		46-231-1	1	
07-10-4703	1		46-231-2	1	Strap Duplicator
07-10-4704	1	Rivet Set, 3-1/2"	46-231-3	1	Strap Duplicator
07-10-4705	1	O.A.L.	46-231-5	1	
07-10-4706	1		53-70453	1	3 Piece Aviation
07-10-500	1	Flush Rivet Set			Snip Set
07-170	1	Flush Mushroom Set	62-54405	1	Plastic Kit Box
		w/ Guard	75HP575	1	Sheet Metal handbook
07-20-4703	1	Offet Rivet Set, 3-1/2"	JSM-705	1	3/8" Reversible Air Drill
07-20-4704	1	O.A.L.	TP44	1	Hand Seamer



TP83 & TP84 RIVET GUN KIT

Virtually all the tools you need for riveting in kit form. Intended for professional sheet metal mechanics, serious home builder/ students. Packed in a sturdy molded plastic case. #1 selling kit. Kit with TP83(3x) Gun......P/N 12-00240

Part No.	Description
07-10-4703	3/32" Rivet Set, 3-1/2" O.A.L.
07-10-4704	1/8" Rivet Set, 3-1/2" O.A.L.
07-10-4705	5/32" Rivet Set, 3-1/2" O.A.L.
07-10-4706	3/16" Rivet Set, 3-1/2" O.A.L.
07-11-4704	1/8" Rivet Set, 5-1/2" O.A.L.
07-11-4705	5/32" Rivet Set, 5-1/2" O.A.L.
07-11-4706	3/16" Rivet Set, 5-1/2" O.A.L.
07-11-4703	Flat Rivet Set
07-140	Offset Flush Mushroom Set
07-170	Flush Mushroom Rivet Set w/Guard
07-20-4703	3/32" Offset Rivet Set, 3-1/2" O.A.L.
07-20-4704	1/8" Offset Rivet Set, 3-1/2" O.A.L.

Part No.	Description
07-20-4705	5/32" Offset Rivet Set, 3-1/2" O.A.L.
07-92	Flush Mushroom Rivet Set
08-111	Bucking Bar
08-112	Bucking Bar
08-669	Bucking Bar
08-670	Bucking Bar
09-140	Power Regulator
09-RB-2	Beehive Retainer Spring
09-RH-2	Handi Retainer Spring
17	Rivet Gun
62-14	Molded Plastic Carrying Case

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

Part No.	Pcs.	Description	Part No.	Pcs.	Description
0210A-3/32	3		09H-2	1	Handi Retainer Spring
0210A-1/8	3		09B-2	1	Beehive Retainer Spring
0210A-5/32	3	Jobber's Length Drill	09-140	1	Power Regulator
0210A-3/16			17-3	1	Rivet Gun
0210A-1/4	3		07-10-4703	1	
02-306-21	1		07-10-4704	1	
02-306-30	1	Integral Pilot Cutter	07-10-4705	1	Rivet Set, 3-1/2" O.A.L.
02-306-40	1		07-10-4706	_	
04-M-1/8	10		07-170	1	Mushroom Set w/ Guard
04-M-3/16	10	'M' Type Fastener	18-D -10	+	Washiooni Set W Gaara
04-M-3/32	10	W Type I asterier		-	
04-M-5/32	10		18-D -21	1	Drill Stop
02-441	1	Countersink Cage	18-D -30	1	J 0.0p
04-501	1	Rivet Cutter	18-D -40	1	
04-62	1	Cleco Plier	62-297	1	Canvas Tool Bag
08-670	1	Bucking Bar	JSM-705	1	3/8" Reversible Air Drill

GLASTAR TOOL KIT



This kit is designed for all new Glastar 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

Port No	Boo	Description	
Part No.	Pcs.	Description	
02-2962-21	1	Hospital Observa Dell	
02-2962-30	1	Hreaded Shank Drill	
02-2962-40	1		
02-306-21	1		
02-306-30	1	Pilot Cutters Countersink	
02-306-40	1		
02-306-30-120	1	Pilot Countersink 120°	
02-441	1	Countersink Cage	
02-501-12-40	3	12" Aircraft Extension Drill	
02-501-6-30	3	6" Aircraft Extension Drill	
02-501-6-40	3		
02-C1-H	1	Drill Sets 60 (Number Sizes)	
02-R10B-1/16	3		
02-R10B-1/4	3	Jobbers Length Drill	
02-R10B-11/64	3		
04-200	1	Chip Chaser	
04-20SL	1	Offset Snips Left Handed	
04-20SR	1	Offset Snips Right Handed	
04-22022	1	Multi/Burr-5 5 Blades Included	
04-3090-1/2	2	Spring Tension Clamps A-1/2" D-3-1/2"	
04-62	1	Cleco Plier For Sheet Metal Fastners	
04-EL-1/2-1/2	10		
04-EL-3/4-1/2	10	Side Grip Fastener Capacity-0-1/2" Reach 1"	
04-K380	1	Deburr Tool W/ 3/4" Blade	
04-M-1/8	150		
04-M-3/16	25	'M' Type Sheet Metal Fastener	
04-M-3/32	250	7,	
04-K380	1	Deburring Tool	
04-M-1/8	150		
04-M-3/16	25	'M' Type Sheet Metal Fastener	
04-M-3/32	250	Type chock motal r dotoner	
07-10-4703	1		
07-10-4704	1	Rivet Set, 3-1/2" O.A.L.	
07-10-4706	1	11101 001, 0 112 011 121	
07-170	1	Mushroom Rivet Set	
08-638	1	Machicol Tilvot Cot	
08-647	1		
08-721	1	Bucking Bar	
08-760B-1	1		
09-140	1	Power Regulator	
10-37001	1	360° Pop Riveter	
1245	1	12" Flex Ruler	
17-3XSP	1	Rivet Gun	
20-127-4S	1		
l		90° Angle Drill Attachment	
53-211-4263	2	Rivet Squeezer Punch & Die Set	
53-211-4264	2	Hand Courses V:	
53-420-2A	6	Hand Squeezer Kit	
53-RBH-2	2	Beehive & Handi Retainer Spring	
61-860	1	Center Punch & Scribe	
62-54405	1	Kit Box-Plastic & Metal	
CP-785	1	Air Drill, Reversable 3/8" Chuck	



Deluxe Riveting Kit contains everything needed to build and maintain all metal aircraft. This kit is highly recommended for the professional mechanic or the experienced home builder.

Description	Part No.	Price
Deluxe Riveting Kit With Econ 3x Rivet Gun	12-04833	
Deluxe Riveting Kit With Pro 2x Rivet Gun	12-04834	
Deluxe Riveting Kit With Pro 3x Rivet Gun	12-04835	
Deluxe Riveting Kit With Pro 4x Rivet Gun	12-04836	

MASTER BUILDERS KITS



The Master Builder's Kit is the most comprehensive riveting kit. It contains the tooling needed to build some of the most popular aluminum airplanes, including the RV series, the Thorp T-18, the Midget Mustang, and many others. This kit is also very popular with airframe mechanics needing an all-in-one riveting kit.

Description	Part No.	Price
Master Builders Kit W/ Econ 3x Rivet Gun	12-04837	
Master Builders Kit W/ Pro 2x Rivet Gun	12-04838	
Master Builders Kit W/ Pro 3x Rivet Gun	12-04839	

RANS S-19 BUILDERS KIT



The rans-19 kit is available as a quick build kit that requires considerably less tools than in the past. Redesigned kit complies with the tool requirements. This kit now contains only the essential tools you need to successfully construct this popular homebuilt P/N 12-04842

ACU CENTER TOOL KIT



This Acu-Center tool is a precision measuring aid designed to provide fast, repeatable rod end service and replacement by providing its user with the most accurate rod end adjusted length measurement possible. This is accomplished through the Acu-Center's precision fit, rod end / ball centering flange and absolute zero measuring point.

AGM 1' ACU-Center only not a Kit......P/N 12-05545

AVIONICS MAINTENANCE KIT



This Avionics Maintenance Kit has all of the essential tools to work on every aspect of aircraft electronics systems. Whether it's a simple electrical repair or a complete system rewire, you'll find this kit indispensable in getting the job done quickly and professionally.....P/N 12-04823

LOYD'S RIVET DRILL GUIDE



This set is designed one size under bore and hardened C1144 steel for long life. The drill lube is to ensure smooth minimal friction between the drill bit and the guide, cooling the bit, keeping it from galling, which aids in longer drill and guide life. Dip drill bit in lubricant at least once for every rivet. The guides are easy to use. First select the appropriate guide for the rivet being drilled. The guides allow you to drill straight and center every time. They are compact, easy to grip and easy to spot if dropped. They were designed to eliminate double drilled holes and drill bits "skating" off of rivets.......P/N 12-03749

RV-12 QUICKBUILD KIT



This kit contains all the tools you need to build Van's exciting RV-12 Quickbuild Kit. The RV-12 has become an instant favorite of Light Sport Aviation (LSA) kitplanes because it's so remarkably easy to assemble. It requires virtually no sheet metal skills, and needs little more than a few hand tools. We've made your task even easier by bringing together all the tools you'll need into one complete kit, and priced it to be easy on your wallet. This kit is based on Van's recommended tool list, as well as

ZODIAC BUILDERS KIT



Zodiac Builder's Kit contains all the recommended and most useful tools that you will need to build a Zodiac aircraft. This kit is ideally suited for the professional mechanic or the experienced home builder. P/N 12-04844

ENGINE SPECIALIST KIT



This kit is designed for the engine and powerplant specialist. It contains an array of tools and equipment to take apart, check, inspect, overhaul,

JOURNEYMANS KIT



This Journeyman kit is for the aspiring A&P Mechanic or Homebuilder who needs a comprehensive professional kit, but is not yet ready for a Master Kit. It contains a broad selection of tools used frequently by the Airframe Mechanics at a price that's affordable to those Journey Mechanics starting out in the field.

Description	Part No.	Price
JBK-2602a w/2602a Econ 3x Gun	12-04825	
JBK-2x w/ATS Pro 2x Rivet Gun	12-04826	
Journeyman Builders Kit w/3x Rivet Gun	12-04827	
Journeyman Builders Kit w/Pro 4x Rivet Gun	12-04828	

DL KITS – RIVET TOOL

PRO X-SERIES RIVET GUNS



The standard tool used in aircraft manufacturing plants such as Boeing and Lockheed-Martin has just gotten better! The popular X-Rivet Guns have been retooled to make them smoother and more powerful, while still keeping them completely interchangeable with Chicago Pneumatic rivet guns. They are slow hitting with excellent finger tip control.

1/8" Aluminum (3/32" Steel) Rivet Capacity. Accepts all .401 shank rivet sets and attachments. Non-slip Powder Coat Finish. 1/4" NPT Inlet. Lifetime ATS-Pro Warranty.

Model No.	BPM	Capacity	Stroke	Part No.	Price
2X	2580	1/8"	2-1/4"	12-04857	
3X	2160	3/16"	2-7/8"	12-04858	
4X	1740	1/4"	3-1/16"	12-04859	

ATS FIELD RIVETING KITS



The ATS Pro Field Kit features top of the line tools. In it you get the best-selling Palm Drill (featuring a true variable speed trigger from 0 to 2600 RPM), plus an assortment of cobalt drill bits in the 4 most commonly use sizes (#40, #30, #21, and #11).

For perfect riveting jobs, ATS gives you the ATS Pro Rivet Gun with

feather trigger (including springs), two of ATS most popular Tungsten bucking bars, and a full set of riveting snaps. Included is a set of rivet gauges to make sure you get things right, and a bottle of oil to keep those tools running at peak performance.

It all comes to with a quality shadow-foamed hard tool case, making this the kit you will want to show off!

Black	P/N 12-05449
Red	P/N 12-05449-1
Black	P/N 12-05450

AHRS SYSTEMS TOOL KIT



The fittings capture the tubing with stainless steel retainers. By suppressing the release ring (around the tubing entry port on the fitting), the tubing is easily removed. Within just a few minutes, you'll be able to disconnect and reconnect tubing. seals, and maintaining precise diameter during the manufacturing process, ensures a reliable seal. For Experimental

Aircraft ONLY. Applicability and suitability of this kit is the responsibility of the builder. Kit Includes: • 2 x 102559-000, Static Port Alum 3/8" NPT of the builder. Kit Includes: • 2 x 102559-000, Static Port Alum 3/8" NPT • 2 x 102630-000, Fitting Tube Pneumatic Strt Female 1/4" OD PTC X 1/8" NPT • 6 x 102631-000, Fitting Tube Pneumatic Strt Male 1/4" OD PTC X 1/8" NPT • 2 x 102631-001, Fitting Tube Pneumatic Elbow Male 1/4" OD PTC X 1/8" NPT • 25' x 102632-000, Tube Pneumatic Polyethylene 0.17 ID X .25 OD BLU • 25' x 102632-001, Tube Pneumatic Polyethylene 0.17 ID X .25 OD GRN • 35' x 102632-002, Tube Pneumatic Polyethylene 0.17 ID X .25 OD Natural • 3 x 102639-000, Fitting Tube Pneumatic Y Union 1/4" OD • 1 x 102639-001, Fitting Tube Pneumatic T Union 1/4" OD • 1 x 102631-000, Tube Cutter • 30 x 102642-000, Span Bushing • 2 OD • 1 x 102641-000, Tube Cutter • 30 x 102642-000, Snap Bushing • 2 x 102643-000, Sleeve Alum Coupling Tube 3/16" OD • 2 x 102644-000, Fitting Alum Flared Tube and Pipe Thread 3/16" OD

P/N 12-03283

PILOTS TOOL KIT

The fleet of general aviation aircraft is aging. Mandated maintenance promotes reliability, but experienced pilots know mechanical but experienced pilots know inscriaincal issues can still arise, sometimes far from an open FBO. This Pilot's Tool Kit provides the most common tools and other contents to help get you airborne, including a set of combination wrenches, 8" adjustable wrench,

tire pressure gauge, locking pliers, 6-in-1 screwdriver, hex wrenches, and diagonal cutters. A special aviation spark plug socket handles most spark plug makes, and a way-cool mini-ratchet and socket set provide Finally, a telescopic mirror, cable ties, and 30 feet of aviation-grade safety wire are included. Everything is nicely organized into a tough roll-up pouch......P/N 12-03772



BLUE PNEUMATIC R AND D HAND TOOL KIT BP-738K METRIC

BP-738 Hand Tool. Mandrels including M3, M4, M5, and M6. Also includes 40 total pcs of assorted rivet nuts that match included mandrels. Comes in molded plastic caseP/N 12-04871

FIS SYSTEMS TOOL KIT



The fittings capture the tubing with stainless steel retainers. By suppressing the release ring (around the tubing entry port on the fitting), the tubing is easily removed. Within just a few minutes, you'll be able to disconnect and reconnect tubing. O-ring seals, and maintaining precise tubing diameter during the manufacturing process, ensures a reliable seal. For Experimental Aircraft ONLY. Applicability and suitability of this kit is the responsibility of t • 1 ·

Union Tee • 2 - Union 90° • 2 - Synthetic Rubber Grommet • 30 - Snap Bushing • 2 - Female Connector • 2 - Static Port • 2 - AN Hardware Assembly • 1 - 25' 1/4" Green Tubing (Pitot) • 1 - 32' 1/4" White Tubing (Static) • 1 - 23' 1/4" Blue Tubing (AOA)P/N 12-03284

ZENAIR HAND RIVETER

Hand Riveter with Custom Machined Heads. Riveter Heads (changeable Nose Bushing piece). ZENAIR blind (or pulled) rivets have been used to construct the all-metal Chris Heintz designs since the 1970s, and make riveting a quick and easy process! The ZENAIR riveting system forms the rivet head as the blind rivet is pulled, providing a low profile dome finish and high shear strength. Fast installation,

simple tools and low cost make this a popular riveting system with homebuilders! Note: The riveter is supplied with the custom machined heads, required for the Zenair blind rivets ((for use with Zenair blindP/N 12-03713 rivets, sold separately).



ZENAIR PNEUMATIC RIVETER

Pneumatic Riveter with Custom Machined Heads for use with Zenair blind rivets, sold separately ZENAIR blind (or pulled) rivets have been used to construct the all-metal Chris Heintz designs since the 1970s, and make riveting a quick and easy process! The ZENAIR riveting system forms the rivet head as the blind rivet is pulled, providing a low profile dome finish and high shear strength. Fast installation, simple tools and low cost make this a popular riveting

system with homebuilders! Note: The riveter is supplied with the custom machined heads, required for the Zenair blind rivets, for use with Zenair blind rivets, sold separately.....P/N 12-03712



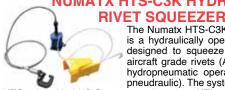
Description A4 Blind Rivet

ZENAIR BLIND RIVETS

These rivets are corrosion resistant, and the stem becomes locked in after being set. Also, not many different lengths are required for different diameters or thicknesses. In the Assembly Instructions, they are designated as A4 (1/8) and A5 (5/32). Note: Sold in packages of 100.

ength.	Grip	Drill	Min. Single Shear Length	Part No.	Price
1/8" / 3.2mm	1/4" / 6.4mm	#30	110 lbf / 50kg	12-05538	

5/32" / 5/16" / 7.9mm A5 Blind Rivet #20 180 lbf / 80kg 12-05539 NUMATX HTS-C3K HYDRAULIC



The Numatx HTS-C3K C-Squeezer System is a hydraulically operated hand held tool, designed to squeeze up to 1/8" diameter aircraft grade rivets (AD alloy). This unit is hydropneumatic operated (also known as pneudraulic). The system is comprised of an

HTC-3 hand-held C-Squeezer unit and an HTI-10 Pressure Intensifier. The fully hydraulic C-Squeezer offers the advantages of decreased weight, smaller size, and constant force when compared to traditional pneumatic only squeezers. This reduces operator fatigue, allows for use in more confined areas, and improves control of the s2queezing action (feathering operation). The units are built from high-quality aircraft grade materials, with parts made on CNC machining centers and features held to close tolerances, for years of dependable operation

Description	Part No.	Price
System Only - No Yoke	12-05135	
System with 1.5 in Yoke	12-05136	
System with 3 in Yoke	12-05137	
System with 4 in Yoke	12-05138	



Maximum Air Pressure: 90 PSI Standard Equipment Includes: • 1/4" Erikson Collet • Two Collet Wrenches Capacity: • 1/8", 1/4" Shank Carbide Burs

- 1" Mounted Wheel 3" Cut off Wheel 25,000 RPM Features: .3 HP Air Inlet: 1/4-18 NPT Rear Exhaust
- Motor housing milled from solid bar for precision motor alignment.
- · Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life. • Smooth Quiet Operation

P/N 12-05591

NOVA® 90° GRINDER



Maximum Air Pressure: 90 PSI Standard Equipment Includes: • 1/4" Erikson Collet • Two Collet Wrenches Capacity: • 1/8", 1/4" Shank Carbide Burs
• 1" Mounted Wheel • 3" Cut off Wheel

Features: • .3 HP • Air Inlet: 1/4-18 NPT · Rear Exhaust · Motor housing milled from solid bar for precision motor alignment. • Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life. • Smooth Quiet Operation

12,000 RPM......P/N 12-05593 20,000 RPM......P/N 12-05592

NOVA® 5 1/2 INCH EXTENDED LONG REACH GRINDER



Maximum Air Pressure: 90 PSI Standard Equipment Includes: • 1/4" Erikson Collet • Two Collet Wrenches

Capacity: • 1/8", 1/4" Shank Carbide Burs • 1" Mounted Wheel • 3" Cut off Wheel • 25,000 RPM Features: • .3 HP • Air Inlet: 1/4-18 NPT Rear Exhaust • Motor housing milled from solid bar for precision motor alignment. • Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life. • Smooth Quiet Operation

NOVA® STRAIGHT GRINDER FRONT EXHAUST



Maximum Air Pressure: 90 PSI Standard Equipment Includes: • 1/4" Collet • Two Collet Wrenches Capacity: • 1/8", 1/4" Shank Carbide Burs

• 1" Mounted Wheel • 4" Cut off Wheel •

18,000 RPM / 20, 000 RPM **Features**: • -18,000 RPM • .9 HP • Air Inlet: 1/4-18 NPT • Front Exhaust • Motor housing milled from solid bar for precision motor alignment. • Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life. • Smooth Quiet Operation 18,000 RPM......P/N 12-05595 22,000 RPM......P/N 12-05596



NOVA® PENCIL GRINDER

 Smooth Quiet Operation • 1/8" Collet
 60,000 RPM • Hardened Alloy Steel
 Cylinder • Rear Exhaust With Over Hose Muffler • Motor housing milled from solid aluminum bar for precision motor alignment Maximum Air Pressure 90 PSI · Includes Two Wrenches, Hose, and Air Fitting.



NOVA® 90° ANGLE HEAD

• The #1 industry best seller, a must have for all mechanics. • Accepts 1/4-28 Threaded Angle Bits. • Capacity: 1/4" • Angle Head may be rotated 360° for superior operator control • Air Inlet 1/4-18 NPT

Motor housing milled from solid bar for precision motor alignment · Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life · Smooth quiet operation · One Year Warranty P/N 12-05599



WASHER WRENCH SET

Washer Wrench Set. This is a (4) piece washer wrench set. It's used to hold AN/ aircraft washers to reach into hard to reach areas.....P/N 12-04723

NOVA® 45° ANGLE HEAD



Accepts 1/4-28 Threaded Angle Bits Capacity: 1/4" • Rear Exhaust • Angle Head may be rotated 360° for superior operator control • Air Inlet 1/4-18 NPT

Motor housing milled from solid bar for

precision motor alignment • Motor cylinder and rotor are hardened alloy steel to ensure proper alignment and long life • Smooth quiet operation • One Year Warranty • For those hard to get to areas • This industry standard tool is a must have for every mechanic • Scroll down to purchase complete Nova tool.....P/N 12-05601



NOVA® ORBITAL SANDER
• Standard Equipment Includes: 2" and 3" Holder • Maximum Air Pressure: 90 PSI • Air Inlet 1/4-18 NPT • Rear Exhaust • 12,000 RPM • Motor housing milled from solid bar for precision motor alignment · Motor cylinder and rotor are hardened

alloy steel to ensure proper alignment and long life · Orbital Action produces a swirl free surface • Smooth quiet operation • Shown with 3" disc holder. Compact design and 90° Angle head for tight work areas. P/N 12-05598



NOVA COMPACT PISTOL **GRIP DRILLS**

 Feathering Trigger Allows Operator Complete Control of Speed • 360° Rotatable Exhaust · Quiet Smooth Operation · Air Inlet 1/4-18 NPT • Rubber Grip for Operator Comfort • One Year Warranty

1/4	Inch Chuck and Ke	yP/N 12-05587
		P/N 12-05588
		vP/N 12-05589

AXLE AND NOSE FORK NUT WRENCHES



These great little specialty tools are a must for all aircraft owners and mechanics as well. They are available in two sizes and will cover almost all GA aircraft. They are precision laser cut from 4130 chrome moly aircraft grade steel and heat treated to a 42 rockwell hardness so they are very strong. They then get zinc plated to prevent corrosion and provide many years of service. These are .135" thick so you

can rotate axle nuts and test fit the keepers or cotter pins in place. These tools weigh 4 oz. each.

1-1/2	inchP/N	05-12377
1-3/4	inchP/N	05-12475

ULTIMATE PROPELLER WRENCHES



Unlike anything on the market at any price. This tool makes short work of R&R on your constant speed propeller. The one end ratchets without removal from the bolts and the other end is extremely strong fully

reversible Crows Foot for torquing the propeller. Precision laser cut from 4340 Aircraft grade steel, heat treated to a 50 rockwell. Crows foot end is fully C&C machined for a perfect fit on the bolts. Utilizes both 1/2" & 3/8" ratchets, torque wrenches and extension tools. Crows foot end is offset 15° for double the versatility for difficult bolts behind prop blades. Black oxide plated for years of service and corrosion protection.

5/8	inchP/N	l 05-12481
3/4	inchP/N	05-12375



TRIM TAB ADJUSTMENT TOOL

Adjusts trim tabs evenly with less chance of scratching paint.

P/N 13-19791

RIVET CONVERSION KITS



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

Size	Part No.
6-32	P/N 12-13680
8-32	P/N 12-13681
10-32	P/N 12-13682



RIVETING HAMMERS

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.

Dort No	Part No. Blows / Capacity Alum. Bore Stroke		Longth	Weight	Price		
Part No.			Siroke	Length	(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	
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	



AIRCRAFT RIVET GUNS

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	



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	Мо	del
Specification	3000	6000
Max. Force	3000	6000
Rivet Capacity Dural	1/8"	3/16"
Steel	3/32"	5/32"
Standard Yoke Reach	2"	2"
Air Hose Size	1/4"	1/4"
Set Travel	9/16"	9/16"
Recommended Line Pressure	90 PSI	90 PSI
Weight	6 lbs.	6 lbs.

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

SAFETY CABLE NOSE TOOLS

The unique tensioning/crimping Terminator Tool tensions the cable, crimps the ferrule on the cable, and cuts the cable flush with the ferrule. This tool utilizes the best principals of ergonomic design, user-friendly features, and improved operational durability. It is so user friendly that an entry level technician can learn the Safety Cable installation method in less than 30 minutes. The short length of this tool allows the user to get into tight places

where access is restricted. The ergonomic design comfort-ably fits the operator's hand. The robust construction and the precise dimensional quality of the tool provide the reliability and repeatability that you are looking for. The tool nose can be rotated 360° for the optimum position of each Safety Cable™ installation while allowing the tool to stay in a comfortable ergonomic position.

ING HAMMERS

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 labelies be at the property of 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 12-02004



3X RIVET GUN KIT

Virtually all the tools you need for riveting in kit form. Intended for professional sheet metal mechanics, serious home builder/students. Packed in a sturdy molded plastic case. #1 selling kit. Visit www.aircraftspruce.ca for a complete list of kit contents.

P/N 12-00240



ATS ECONOMY **RIVETING KIT (3X)**

This cost-saving riveting kit features ATS's popular 2602A Rivet Gun , a selection of 4 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". Comes to you in a stylish molded case to keep things neatly organized. This is the prefect "field" kit to take

with you anywhere -- it has the riveting tools you need conveniently laid out in one handy ready-to-go packageP/N 12-03195



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, however is ideal for a variety of other aircraft as well. All the riveting sets and dimple dies are made from

heat treated stainless steel. Dimpling & Riveting Kit Contents: Set holder block, Cup sets, Flat sets, and Spring back dimple dies. Dimple Dies 3/32", 1/8" for rivets; 6-32, 8-32, 10-32 for screws. Cup Sets 3/32", 1/8", Flat Sets 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 1/2". Polyethylene 4" X 4" storage block.



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 squeezerP/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



Safety Cable is a system used to secure hardware. Unlike traditional lock wire, Safety Cable is a much cleaner and faster way to secure hardware in critical areas of an aircraft. The system

consists of a crimping tool and cables. Specifications: • .032" Diam. x 18" Cable Length • Type 321 CRES • Includes 50 cables with a magazine with 50 ferrulesP/N 12-04569



RIVET SETS STRAIGHT .401 SHANK (AN470)

Longth	Part Numbers					
Length "L"	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
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		Part Numbers				
"L"	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
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 (AN426)

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

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 (AN426)

Dia.	Length	Part No.	Price	Dia.	Length	Part No.	Price
1"	3"	SM101		1"	5-1/2"	SM102	

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
5/32"	SMHS10-5	
3/16"	SMHS10-6	
1/4"	SMHS10-8	



RIVET SETS OFFSET .401 SHANK (AN470)

Length			Part Numb	pers		
"L"	Rivet Size 3/32"	Rivet Size 1/8"	Rivet Size 5/32"	Rivet Size 3/16"	Rivet Size 1/4"	Price
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 (AN426)



h	Dia.	Length	Part No.	Price
U	1"	3-1/2"	SM140	-
	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.



OFFSET FLUSH MUSHROOM SETS

Model #	Length	Description	Part No.	Price
07-140	3 -1/2" (89 mm)	Offset Flush Set .401 Shank 1" Face	12-03738	
07-141	5 -1/2" (140 mm)	Offset Flush Set .401 Shank 1" Face	12-03739	
07-142	7 -1/2" (191 mm)	Offset Flush Set .401 Shank 1" Face	12-03741	



OFFSET FLUSH SET

Excellent for limited access areas.

Specifications: • Shank: 0.401 • Surface Face: 1" x 1 1/2"P/N 12-02892



T Flush Set.

Specifications: • Surface: 1 1/2" x 1/2". Overall Length: 5 3/4". Weight: 0.50 lbs. Shank: 0.401 P/N 12-02894



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	

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



KNOCKOUT PUNCHES FOR HIGH SHEAR RIVETS

Knockout punches for high shear rivets .40 shank. Made in the U.S.A.

Description	Length	Rivet Size	Part No.	Price
SMHS401K-4	3-1/2"	1/8"	12-01116	
SMHS401K-5	3-1/2"	5/32"	12-01117	
SMHS401K-6	3-1/2"	3/16"	12-01118	
SMHS401K-8	3-1/2"	1/4"	12-01119	

.401 SHANK RIVETING HAMMER **ACCESSORIES**



Description	Part No.	Price	Description	Part No.	Price
Moil Point	12-05096		Spotweld Breaker	12-05102	
Panel Cutter	1957		Scraper	12-05103	
Chisel	12-05099		Flush Set	12-01270	
Rivet Buster	12-05101				





Quick Change

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: Desgined as a fixed type to securely hold rivet set in rivet gun.

Type	Rivet Hammer	ID	OD	Part No.	Price
Beehive	1X-2X-3X-4X; E3- E5; 3R-5R	1.09"	1.06"	12-01077	
Beehive	5X-7X-9X	1.5"	1.2"	12-01078	-
Quick Change	AVC 10,11,12,13	1.40"	1.14"	12-01073	
Quick Change	100B-200B,E3,E5	1.09"	1.06"	12-01079	



STUBBY MICROSTOP
Stubby Microstop 1/4"-28 Threaded Shank for use in angle motors. Adjustable in 0.001" increments. 1/4"-28 female threads. 1/2" cutter capacity. Rated for 3,000 RPM use.

P/N 12-02893



BACK RIVETING RIVET SET

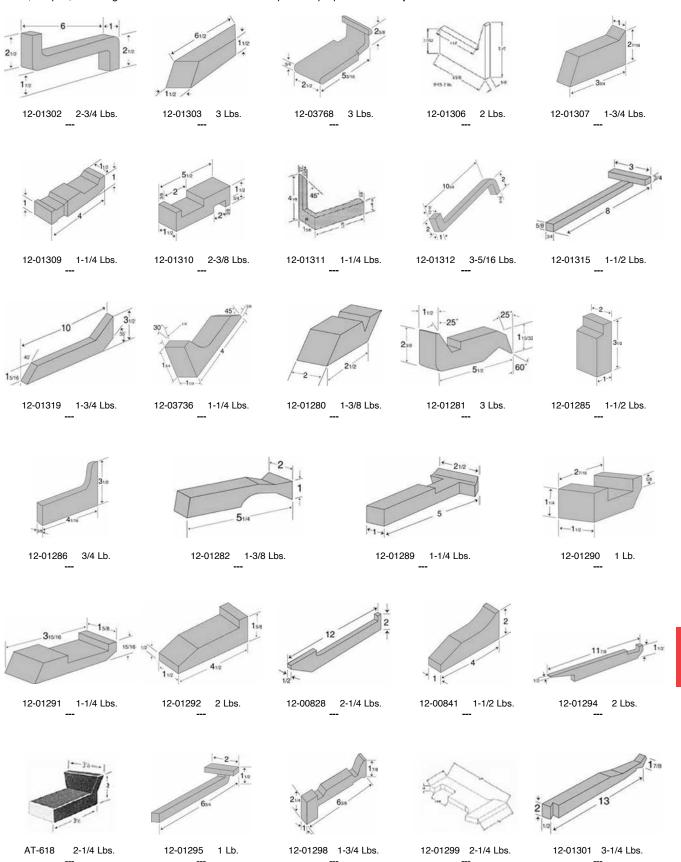
For back riveting flush rivets on RV control surfaces and other homebuilts. Has a plastic Delrin sleeve with spring to hold multiple sheets of aluminum together while riveting. 0.401 shank x 4-1/8 inches long.

Back Rivet Set 3-1/2" long

P/N 12-07100-3 ea.

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.



BUCKING BAR 601

5.25 lbs.....P/N 12-02907

BUCKING BAR 638

1.25 lbs. Style BP/N 12-02899

BUCKING BAR 670

2 lbs. Style A.....P/N 12-02898

BUCKING BAR 692

2.9 lbs.....P/N 12-02909

BUCKING BAR 736

2.11 lbs.....P/N 12-02908

BUCKING BAR 750U-1

1.65 lbs.....P/N 12-02906

BUCKING BAR 763

1.25 1bs.....P/N 12-03736

BUCKING BAR KIT

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

AT647 Bucking Bar • 1 AT681 Bucking Bar • 1 AT647 Bucking Bar • 1 AT670 Bucking Bar • 1 AT647 Bucking Bar • 1 AT670 Bucking Bar • 1 AT670 Bucking Bar

ATS TUNGSTEN BUCKING **BAR KIT - 4 PIECES**

Tungsten bucking bar kit containing our most popular bucking bars. ATS6005, ATS6006,

BAR SET - 7 PIECES

7 Piece Tungsten bucking bar kit containing the complete set of tungsten bucking bars. The bars come in a custom foam lined case. P/N 12-05452

BUCKING BAR KEEPER
Protect Your Workpiece: The Bucking Bar Keeper is specifically designed to fit seamlessly onto a standard ATS 6007 Tungsten Bucking Bar. It acts as a reliable shield, preventing your bar from accidentally dropping onto your precious workpiece. Eliminate Riveting Woes: If you've ever riveted wing skins, you know the agony of mistakenly

dropping your bar into critical areas like the leading edge or, worse, onto the spar. With the Bucking Bar Keeper, those worries are a thing of the past.P/N 12-06310

BUCKING BAR BUMPER ST

Say Goodbye to Taping: With our Bucking Bar Bumper, you can bid farewell to the time-consuming practice of taping your bucking bar. Achieve professional-grade rivets without the hassle. Perfect Rivets Every Time: Precision is paramount in riveting, and our guide is designed to help you set the perfect rivet every single time. No more rework or subpar results.

Compatible with Standard Tungsten Bucking Bars: The Bucking Bar Bumper is tailor-made to fit standard 1x4x5/8 tungsten bucking bars, specifically model ATS 6007. It's the perfect companion for your trustedP/N 12-06305

V-DRILL PORTABLE GUIDES



The V-Drill Guide is like a portable drill press for precision alignment. V-groove along the bottom of precision alignment. V-grove along the bottom of the guide allows for perpendicular alignment with all drill sizes on round parts and corners. Bottom surface is precision ground to assure stability and accurate perpendicular alignment on flat surfaces.

Drill guide is sized for drill bit sizes: 1/8" to 3/8", and made for 17 standard drill sizes (1/8 to 3/8 in 1/64 increments). Guides are made from special nickel alloyed steel that is heat treated for durability. Drill Straight - Every Time! Drill Guide comes with a handy plastic storage case and is 100% American Made Quality. Features: • Accurate - 90 degree V-groove along the bottom - automatically squares up the drill with the surface · Portable - Pocket size - Reusable plastic storage tube • Built to Last - Special nickel alloyed steel · High Quality - Natural steel finish - non-plated - Heat-treated for durability. 3/8" to 1/2"......P/N 12-03455

V-TAP GUIDES

The V-Tap Guides are for regular ground taps for hand tapping threads into pre-drilled holes. Works great on flat surfaces, round parts, and angled edges. Tap Straight - Évery Time! Standard: Guide holes are sized for ANSI Standard

Ground Taps (0-80, 1-64, 1-72, 2-56, 2-64, 3-48, 3-56, 4-36, 4-40, 4-48, 5-40, 5-44, 6-32, 6-36, 6-40, 8-32, 8-36, 8-40, 10-24, 10-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16,

3/8-24, 7/16-14, 7/16-20, ½-13, ½-20, 5/8-11, 5/8-18). A protective plastic storage tube is includedP/N 12-02938

Metric: Guide holes are sized for ANSI Standard Ground Thread Metric Taps (1.6mm, 2mm, 2.5mm, 3mm, 3.5mm, 4mm, 5mm, 6mm, 8mm, 10mm, 12mm, 14mm, 16mm). A protective plastic storage case is ..P/N 12-02939 included

STI V-TAP GUIDES (SCREW THREAD INSERTS)



The STI (Screw Thread Insert) V-Tap Guides are for Helicoil type taps to repair striped out threads. STI V-TAP Guide (Unified Course Threads): Can handle standard ground STI hand tap sizes: 9/16-12, 1/2-13, 7/16-14, 3/8-16, 5/16-18, 1/4-20, 12-24, 10-24, 8-32, 6-32

P/N 12-02940

STI V-TAP Guide (Unified Fine Threads): Can handle standard ground STI hand tap sizes: 5/8-18, 9/16-18, 1/2-20, 7/16-20, 3/8-24, 5/16-24, 1/4-28, 10-32, 8-36......P/N 12-02941

TUNGSTEN BUCKING BARS

Dims: 4" long, 1" wide, 5/8" high

Weight: 1.6 lbsP/N 12-04861

Dims: 3/4" long, 1.5" wide, 2.5" high

Weight: 1.6 lbsP/N 12-04863

Dims: 2" x 1-1/2" x 5/8"

Weight: 1.33 lbsP/N 12-04864

Dims: 5/8" long, 1" wide, 1/4" high

Weight: 1.3 lbsP/N 12-04865

Dims: 1" long, 1" wide, 2.25" high **Weight**: 1.4 lbs highP/N 12-04866

BUCKING BAR BUMPER CLEVELAND

Say Goodbye to Taping: With our Bucking Bar Bumper, you can bid farewell to the time-consuming practice of taping your bucking bar. Achieve professional-grade rivets without the hassle. Perfect Rivets Every Time: Precision is paramount in riveting, and our guide is designed to help you set the perfect rivet every single time. No more rework or subpar results.

Compatible with Standard Tungsten Bucking Bars: The Bucking Bar Bumper is tailor-made to fit standard 1x4x5/8 tungsten bucking bars, specifically model ATS 6007. It's the perfect companion for your trusted



IVET TOOL



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 - #10 P/N 12-01129 - #21

P/N 12-01130 - #30 P/N 12-01131 - #40

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.

Rivet Dimpler	P/N 12-00907
Dimple Die Rivet Set	
Dimple Die Screw Set	P/N 12-00565



ATS POP DIMPLE DIES

This product is a clever way to set dimple in sheet metal using a pop riveter. Just place both halves on the sheet metal insert in your riveter and squeeze to form a perfect dimple.

3/32"	P/N 12-00169
1/8"	P/N 12-01179



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



SQUEEZER TIP

Precision at Its Finest: Our Squeezer Tips are designed to fit seamlessly onto a 1/2" OR 3/8' diameter flush

dies. They excel at compressing sheet metal before rivet setting, ensuring unrivaled precision in your work.

Better Than Old Tubing Trick: While the tubing trick has been a go-to method, our Squeezer Tips take it up a notch. You can now achieve superior telerances on over the processing th superior tolerances on every rivet, making your riveting projects topnotch and hassle-free.

Centered Shop Head: One added benefit of using our Squeezer Tips is that they effortlessly position the shop head in the center of the flush die. No more accidental "slopers" – just perfect rivets every time.

OOPS HOLE SAVER RIVET KIT



"OOPS" Hole saver rivet kit. NAS 1097 rivets are 100° flush rivets with a smaller head. The 1/8" 1097 rivet head is the same size diameter as the normal 3/32" 426 Flush rivet. Easy fix on mistakes made on 3/32" flush rivets. The 3/32" NAS 1097 rivets are great for installing nutplates- you can deburr hole (instead of countersinking) and the reduced head on the NAS 1097 will fit. 3 sizes of 3/32": NAS1097AD-3-3, NAS1097AD-3-3.5, NAS1097AD-3-4 3 sizes of 1/8":, NAS1097AD-4-3.5, NAS1097AD-4-4.4, NAS1097AD-4.5 And also includes: Plastic divided storage box.

P/N 12-03781

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

ANGLE DRILL

Affordable Close-Quarter drilling tools with Steel alloy cylinder & rotor for long tool life. Also precision machined for smooth & quiet operation. Milled motor housing - rear exhaust. **Specifications**: • 90° Angle - 1/4" Capacity, 1/4"-28 Thread - 0.3 hp (0.22 kW) • 3200 RPM • 90PSI (MAX) • Overall Length 8-1/4" (210 mm) Weight 1.25 lbs. Made in USA P/N 12-00241

SMALL BODY RIGHT ANGLE DRILL



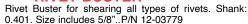
The ACAT 90 Degree Right Angle Drill is a highprecision, powerful, durable drill. 3200 RPM. Weight: 1.8 lbs. Length: 10 1/4". Accepts industry standard 1/4"- 28 threaded bits. P/N 12-02859

AIR DRILL PISTOL - TYPE 4500 RPM Ergonomically designed, compact, quiet, and powerful are just a few of the benefits available with this air drill. The short body length is ideal for working in tight areas

while the light weight and perfect balance makes it the mechanics favorite drill.

Includes chuck guard • 75 HP motor - High Torque Motor • Variable speed teasing trigger standard - adjustable trigger optional • Made in the USA • Capacity: 1/4" • Length: 6" • Weight: 2 lbs P/N 12-00816

RIVET BUSTER



HOLE DUPLICATORS (BUSHING TYPE)

Provide an accurate means of drilling duplicate matching holes in over-lapping sheets. Hole to be duplicated is drilled though bushing when pilot is in place. ea

		<u> </u>	<u> </u>
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")

MIN MAX PERFECT RIVET GAUGE SET



Experience a new era of accuracy in rivet measurement with the Min Max Perfect Rivet Gauge. This state-of-theart tool is a significant upgrade from the standard rivet gauges that have dominated the industry for decades. By leveraging advanced 3D printing technology, we've crafted a gauge that not only matches but surpasses the expectations of professionals in metalworking, aviation, and beyond. Comes in a multicolored pair for AN3 and AN4 RivetsP/N 12-06311

RIVET SET BUMPER



Remove smiles from your build while ensuring you are lined up correctly. This will auto align a 1/8 inch 470-4 rivet head and protect the skin and rivet head from forming smiles. This will give you the show quality plane . Comes in a set of 10P/N 12-06308

MARVEL AIR TOOL OIL

MARVEL brand oil - - especially engineered for care of pistontype 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



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.

#2140	#40 stubby	1 ea.	#2130	#30 stubby
#3140	#40 short	2 ea.	#3130	#30 short
#3127	#27 short	1 ea.	#3121	#21 short
#3112	#12 short	1 ea.	#3114	#1/4" short
#4140	#40 long	1 ea.	#4130	#30 long
#20379	Mini 3-jaw chuc	k		J
	#2140 #3140 #3127 #3112 #4140	#2140 #40 stubby #3140 #40 short #3127 #27 short #3112 #12 short #4140 #40 long	#2140 #40 stubby 1 ea. #3140 #40 short 2 ea. #3127 #27 short 1 ea. #3112 #12 short 1 ea.	#3140 #40 short 2 ea. #3130 #3127 #27 short 1 ea. #3121 #3112 #12 short 1 ea. #3114 #4140 #40 long 1 ea. #4130

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	
#30 (1/8" rivet)	.1285"	1/2"	12-03331	
#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	



ECONOMY COUNTERSINK CUTTERS 100°

Economy High Speed Steel 3/8" and 1/2" dia in 8 different sizes • High Speed Steel • 1/4" -28 Threaded Shanks • 100° 3-Flute Precision Ground • For Use in Micro-Stop Countersink Units • 8 Sizes Available

Size	Decimal Equiv.	Body Dia.	Part No.	Price
#40 (3/32" rivet)	.0980"	3/8"	12-03249	
#40 (3/32" rivet)	.0980"	1/2"	12-03250	
#30 (1/8" rivet)	.1285"	3/8"	12-03251	
#30 (1/8" rivet)	.1285"	1/2"	12-03252	
#27 (#6 screw)	.14440"	3/8"	12-03253	
#20 (#8 screw)	.1610"	3/8"	12-03255	
#12 (#10 screw)	.1890"	3/8"	12-03257	
5/32" (5/32" rivet)	.1560"	3/8"	12-03259	
3/16" (3/16" rivet)	.1875"	3/8"	12-03261	

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 SPRING BACK TYPE DIMPLE DIE KIT WITH BLOCK

This deluxe spring back type dimple die kit has all the most commonly used dimple dies in one package. This kit includes:

2/22 Dimple Die Set	1- #14870 Female Die / 3/8" Dia.
- 3/32 Dimple Die Set	
- 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

Double offset rivet set for universal AN470 rivets, 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
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



AVERY CUTTING & POLISHING WHEEL KIT

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 imper-

fections. 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 handheld 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" WheelsP/N 12-00876 1" x 1" x 3/116" Hole WheelP/N 12-01997

Mandrel for 3700P/N 12-01996 Mandrel for 3719P/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"



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



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: 16 oz 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 marr 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"). 3/32"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 TP134 - (Left hand snip, cuts left & straight) P/N 12-00367

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. BlackP/N 12-11901

3 INCH CUT OFF WHEELS

3" x .03" x 1/4" Cut-Off Wheels by Black Hawk Abrasives are thin but strong die grinder cutting discs built for fast slicing even on hard materials. Also, sometimes called whiz wheels, these 3-inch cutting wheels are made with reinforced fiberglass mesh and a heat-treated aluminum oxide grain bonding matrix for additional safety, lateral stability, and increased longevity. These

cutoff discs have a 3-inch diameter making them perfect for cutting in hard to reach places. Additionally, the .03 inch thickness (1/32 inch thickness) allows for rapid cuts with minimal workpiece material loss. The Black Hawk 3-inch metal cut-off wheel can be used on stainless steel or steel and is ideal for applications such as flash removal, cutting pipes, cutting rods or removing gates to name a few.

3 x 1/32 x 1/4 Inches	
3 x 1/16 x 3/8 Inches	P/N 09-01523
3 x 1/32 x 3/8 Inches	P/N 09-01521

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 AVEX 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

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).

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 pinch-

point 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

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



E-Z BURR - HSS SERIESE-Z Burr High Speed Steel (HSS) tools are the industry standard for quick, effective and consistent front and rear burr removal. No other HSS deburring tool is this durable. By designing the blade to operate independent from springs and plungers, E-Z Burr has created a deburring tool with a flexible blade and a solid shank for optimum performance for deburring metal or plastic components. In addition, the patented E-Z Burr HSS deburring tool allows you to change chamfer settings, from extreme low to extreme high, and cutting blades without removing it from the holder. Once the desired

chamfer is set, it won't change, even from blade to blade. The result is less downtime, more production, and higher profits.

E-Z Burr Tool Specifications:

Series L1A and L1B tools have a working range of -0.0 + .006 inches

Series L2A and L2B tools have a working range of -0.0 + .016 inches

Series L3A and L3B tools have a working range of -0.004 + .015 inches and -.10 + .40mm.

Mote: All tools (front and rear cutting blade with positive rake)
*** METRIC SIZES NOT LISTED, MAY BE AVAILABLE UPON REQUEST AS SPECIAL ORDER ONLY - CALL FOR QUOTE ON SIZES NOT LISTED: 1-877-477-7823

Hole Dia.	Shank Dia.	Blade Series	Part No.	Price
3/32 in. / 2.38mm	.236 in. / 6.00mm	L1A	12-02949	
1/8 in. / 3.17mm	.236 in. / 6.00mm	L1B	12-02951	
5/32 in. / 3.96mm	.250 in. / 6.35mm	L2A	12-02952	
3/16 in. / 4.76mm	.250 in. / 6.35mm	L2B	12-02953	
1/4 in. / 6.35mm	.359 in. / 9.10mm	L3A	12-02955	
2.50mm	6.00mm	L1A	12-02959	
3.00mm	6.00mm	L1A	12-02960	
4.00mm	6.00mm	L2A	12-02961	



EZ-BURR RIVET HOLE BUNDLE

The Rivet Hole Deburring Tool bundle by E-Z Burr includes 5 high performance HSS deburring tools for front and rear cutting. Sizes: 1/8, 5/32, 3/16, 7/32, & 1/4. P/N 12-02956





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. Indispensible tool for use in close quarters where ordinary pliers cannot be used. Tool is 11-1/2" long with 18"

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 styleP/N 12-00629

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 markingP/N 12-00630



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 fin-



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



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



INSTRUMENT HOLE PUNCH ATS-123C

Reversible cutter for both 2-1/4" and 3-1/8" instrument panel holes. Easy to use even with instru-ment panel installed in aircraft. Allows for close work with other instruments already installed. 4 lbs (2Kg) shipping weight. P/N 12-02743



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

CHUCKING REAMERS

We stock straight shank and straight

flute Chucking Reamers in a wide range of sizes.

SEE WWW.AIRCRAFTSPRUCE.CA FOR A COMPLETE LISTING OF OUR CHUCKING REAMERS.



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



24" MANUAL BEAD ROLLER

Bead Rolls Sets Sold Separately. Max Capacity: 19 Ga(.040") Mild Steel. 16 Ga(.050") Aluminum. 21 Ga(.035") Stainless Model 210-24M

P/N 12-02746



UPPER RADIUS FINGER KITS

Mittler Bros. upper radius finger kits (radius measured inside of bend).

Note: 48" kits come with qty 7 of 6" and one each of 3" 2" and 1" fingers

of 3", 2", and 1" fingers.

 1/8 Inch
 P/N 12-02804

 3/16 Inch
 P/N 12-02806

 1/4 Inch
 P/N 12-02808

 5/16 Inch
 P/N 12-02811

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	

T-DOLLY 3/4 X 6



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.

P/N 12-01020



HAND FORMING DOLLIES

These professional series hand dollies are a complete selection of shapes and weights for most forming needs. These dolles can be used with panel beaters or wood slappers. Dollies weight and shapeimpacts 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.CP554 Weight (lbs) 1.97 P/N 12-01008

ARC360 HOLE CUTTER



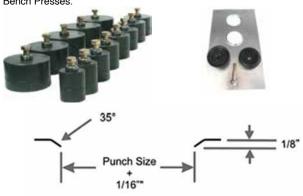
Panel knock put punches and hole saws work well for holes that are aren't too big but it gets harder and more expensive as the size of the hole increases.

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.

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

AIRCRAFT PUNCH & FLARES 1"- 6" OD

Just drill a pilot hole for the 1/2" draw bolt, apply the tool and tighten the bolt for a smooth, flared hole in one easy step. Punch hole only by removing female flare ring and use punch and die. Easily mounts in our Rench Presses



Aircraft Punch / Flare

Material Thickness Range Aluminum - .020" to .040" Mild Steel - .020" to .040"

OD	Part Number	Price
1"	12-02778	
1-1/4"	12-02779	
1-1/2"	12-02780	
1-3/4"	12-02781	
2"	12-02782	
2-1/4"	12-02783	
2-1/2"	12-02784	
2-3/4"	12-02785	
3"	12-02786	
3-1/8"	12-02787	
3-1/4"	12-02788	
3-1/2"	12-02789	
3-3/4"	12-02790	
4"	12-02791	
5"	12-02792	
6"	12-02793	
7pc Set 1"- 3" (MINUS 2-1/4" & 2-3/4")	12-02794	
9pc Set 1"- 3"	12-02796	
13pc Set 1"- 4"	12-02795	

INSTRUMENT HOLE PUNCH







OD	Part Number	Price
2-1/4"	12-02797	
3-1/8"	12-02798	

SEE WWW.AIRCRAFTSPRUCE.CA FOR A COMPLETE SELECTION OF MITTLER BROTHERS TOOLS.

MANUAL BENCH PRESS

Economical & versatile. Bench press accepts tooling for punching round, square & oblong holes; punching louvers; creating radius corners; & shrinking or stretching metal. Punch/flare tooling & instrument hole punches. Easily mounted with included adapters. Can also Be used as arbor press.

Model 2200-MP/N 12-02770

LOUVER PUNCHES LOUVER PUNCH START UP KITS WITH MOUNTING HARDWARE



Size	Part No.	Price
1"	12-02771	
2"	12-02772	
3"	12-02773	
4"	12-02774	
5"	12-02775	
3" Dome	12-02776	
4" Dome	12-02777	



ULTIMATE BOX & PAN BRAKE

The ultimate Box and Pan Brake has a unique 3-finger design. Incorporating moveable segmented bed fingers and apron fingers as well as upper radius fingers.

Radius fingers allow forming aircraft and racecar panels using 3003 to 2024 T3 aluminum, .062 inch mild steel and .0375 inch stainless steel. Bend combinations easily that were extremely difficult if not impossible before. Features include wrenchless upper set back adjustments, 3-1/2" depth of box, 2" down leg, 1" front to rear adjustment and 1/4" reverse bend capabilities. A complete set of upper radius fingers. • Wrenchless upper set back adjustments • 3-1/2 inch depth of box • 2 inch down leg • 1 inch front to rear adjustment • 1/4 inch reverse bend capabilities. Along with the box and pan brake, you will receive a complete set of upper radius fingers (your choice), bed fingers, apron angle fingers, and counterweight(s). The total width of the upper radius finger kit will be 48". You will receive the following fingers: qty 7 of 6" and one each of 3", 2", and 1" fingers totalling to 48".

del 2800-48-16P/N 12-02799
Upper Radius Finger Kits (radius is measured inside of bend)



AIRCRAFT SCALE SET

• 15 x 15" Cast Aluminum Pads • 1500 Lbs Per Pad Capacity Lbs. or Kg • Reads to 1 Lb. / 1/10% Accurate • Displays All Information at Once • Zero All Pads at

Once or Individually • 40 Hr. Battery Life (rechargeable)

Certification Available At Optional Cost.

Deluxe Aircraft Scales include custom length cables with Deluxe Stainless Steel connectors and software to calculate center of gravity height. 4500 lbs.

Model 50297......P/N 12-02816

WHEELING MACHINE (U-WELD MODEL)



This English Wheel U-Weld Kit supplies the components to make your own English wheel, minus the steel tubing. A detailed assembly booklet is provided and the complete kit includes all the key components of the turn-key MetalAce 44F English Wheel. Other kits

on the market come with smaller 2" wide x 2 1/2" diameter anvil wheels, smaller diameter upper wheels, and require more assembly. The screwlift quick release cam unit is fully assembled. Components proudly made in the USA. Features: • Set of 6 lower anvil wheels, 3" wide x 3" diameter Upper wheel, 3" wide x 8" diameter • Upper wheel yoke assembly with axle and spanner • Anvil yoke assembly • Screwlift quick release cam assembly • Set of 4 caster wheels • Assembly instruction manual • Made in the USA. Specifications: • 8 x 3" upper wheel • 2.50 R, 3.75 R, 6.00 R, 12.00 R, 24.00 R and Flat lower anvil wheels.

MA44F-KIT - Components and bill of materials to build a 44F English

BENCH TOP ENGLISH WHEEL

A Rugged, Robust Machine for the occasional metalworking project to the professional craftsmen.

All wheels (anvil & top) are heat treated, hard turned & ground for accurate precision metal forming. • 26-1/2" Deep Throat • 2-1/2" OD - 2" Wide Anvils • 7" OD - 2" Wide Top Wheel • Cam Action Release on Top wheel For Easy Anvil Change · Adjustable Anvil Wheel Angle • 3" x 4" x 1/4" Tube Construction For Minimum

Deflection • Kick Wheel Manual Pressure Adjustment • Anvil Wheels In Radius Of 2-3/8",3-1/4",5", 8-1/2",12" & Flat

Model 2900......P/N 12-02812

24" MANUAL BEAD ROLLER

Bead Rolls Sets Sold Separately. Max Capacity: 19 Ga(.040") Mild Steel. 16 Ga(.050") Aluminum. 21 Ga(.035") Stainless Model 210-24M P/N 12-02746

SEE WWW.AIRCRAFTSPRUCE.CA FOR ROUND ROLL AND STEP ROLL PART NUMBERS.



UPPER RADIUS FINGER KITS

Mittler Bros. upper radius finger kits (radius measured inside of bend). **Note**: 48" kits come with qty 7 of 6" and one each of 3", 2", and 1" fingers.

	■ 1/8 Inch	P/N 12-02804	
	3/16 Inch	P/N 12-02806	
4 Inch		P/N 12-02808	
16 Inch		P/N 12-02811	

AIRCRAFT PUNCH & FLARES 1"- 6" OD



Just drill a pilot hole for the 1/2" draw bolt, apply the tool and tighten the bolt for a smooth, flared hole in one easy step. Punch hole only by removing female flare ring and use punch and die. Easily mounts in our Bench Presses.

OD	Part No.	Price	OD	Part No.	Price
1"	12-02778		3-1/4"	12-02788	
1-1/4"	12-02779		3-1/2"	12-02789	
1-1/2"	12-02780		3-3/4"	12-02790	
1-3/4"	12-02781		4"	12-02791	
2"	12-02782		5"	12-02792	
2-1/4"	12-02783		6"	12-02793	
2-1/2"	12-02784		7 piece set 1"-3"	12-02794	
2-3/4"	12-02785		(w/o 2-1/4" & 2-3/4")	2-1/4" & 2-3/4")	
3"	12-02786		9pc Set 1"- 3"	12-02796	
3-1/8"	12-02787		13pc Set 1"- 4"	12-02795	



INSTRUMENT HOLE PUNCH

OD	Part Number	Price
2-1/4"	12-02797	
3-1/8"	12-02798	



WHEELING MACHINE (BENCH MODEL)

Clearly, this is the most popular of in-home English Wheels. Metal Ace offers extensive anvil configurations to meet your needs. Plus, with the new gusseted frame, it's the strongest benchtop wheel on the market. Trick out your custom-built bike or complete hobby projects without breaking the bank. These English wheeling machines provide 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. Proudly made in the USA. Features: • Thickness capacity for steel is 18 gage;16 gauge with optional stiffener brace. • Features can be rolled into the center of a 44" panel. • Can be mounted to a bench, clamped in a vice 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. **Specifications:** • 3.25" radius lower anvil • 8" upper wheel • 22" throat depth • Reinforced frame • 18 gauge mild steel capacity .080 AL capacity • Made in the USA.

Wheeling Machine MA 22B......P/N 12-00571

AUULUUIILU	
Radius Wheel 5" 22B-5.00	P/N 12-02026
Radius Wheel 5" 22B-5.00 Narrow	P/N 12-02027
Radius Narrow Offset Wheel 5" 22B-5.00NO	P/N 12-02028
Optional Stand for the 22B Wheeling Machine	MA22B-STAND
•	P/N 12-00575



PLANISHING HAMMER

Speed up fabrication time on complex multi form aluminum and steel panels for making those impossible to find replacement parts. • 4600 Hits Per Minute @ 90 PSI • Rear Adjuster Sets Load Force & simplifies Anvil Changes • Foot Pedal Control for Hands Free Operation

9 Radius Anvil Heads Included: 3/4", 1-1/2", 2", 3", 4", 6", 8", 12" & Flat • 12"P/N 12-02813 Model 2700... 24" Model 2700-24P/N 12-02814

SEE WWW.AIRCRAFTSPRUCE.CA FOR A COMPLETE SELECTION OF MITTLER BROTHERS TOOLS.

TO

MILTON TOOLS



MILTON 1/4" FNPT FEMALE W-STYLE KWIK-CHANGE® COUPLER

MILTON DUAL HEAD CHUCK DIAL TIRE GAUGE 0-160 PSI



Milton (S-936) High Pressure Dial Tire Pressure Gauge - Dual Head Air Chuck and 12" Hose.

No need to worry about batteries with this durable dual head chuck dial tire gauge with a working pressure range of 0-160 PSI has dial-type gauge with internal

diaphragm construction for greater durability. Includes a 12" hose and 45 degree chuck head with deflator valve. Comes with a protective rubber boot for added durability.......P/N 12-05342

MILTON TIRE VALVE EXTENSION

Replacement Extension Core.

MILTON INFLATOR GAGE DUAL HEAD CHUCK - 15" HOSE Milton Original Dual Head Chuck Tire Inflator Gauge



Milton Original Dual Head Chuck Tire Inflator Gauge - 15" Hose. Milton Industries specializes in tire inflator gauges and this original S-506 dual chuck inflator gauge was the first gauge of its kind ever built in the industry. Gauge and valve cartridges are both replace-



MILTON TIRE VALVE ADAPTER

Government - Tire Valve Adaptor.

Features: Extension assembly with clip ring and chain. P/N 12-05380

MILTON LOW PRESSURE TIRE GAGE 2-20 PSI

TIRE GAGE 2-20 PSI
Low pressure tire gauge for 2-20 PSI provides accurate, long life with trouble free performance. Made of a durable plated brass with 4 side nylon indicator bar. Always check tire pressure when tires are cold.

P/N 12-05322



MILTON COMPRESSOR ACCESSORY KIT



MILTON MALE HEX 1/4 NPT X 1/4 NPS

1/4" MNPT hex nipples are brass hose fittings that are used to assemble new hoses or replace old fittings on hoses. 1/4" Male NPT x 1/4" NPS ball socket.

P/N 12-05328



MILTON 0-400 PSI DUAL HEAD CHUCKSTEMPRESSURE ASSEMBLY

This dual chuck stem pressure gauge assembly kit includes a flexible hose whip and metal carrying case. Pressure range of 0 - 400 PSI......P/N 12-05376

MILTON GAUGE 1/4 NPT 0-160 PSI -BOTTOM MOUNT



Use this pressure gauge for reliable service with compressors, regulators, air lines, pneumatic tools and equipment. Made up of a brass mechanism, ABS case and a polycarbonate lens, this gauge is resistant to heat, corrosion, water, salt water and oil. Can also be used in steam applications if less than 120 degrees Fahrenheit. The 1/4" NPT pressure gauge has a bottom mount and offers a pressure range of 0 to 160 PSI. 2" face diameter ... P/N 12-05336

MILTON GOVERNMENT - HIGH PRESSURE SAFETY INFLATOR



Government - High Pressure Safety Inflator. Features: 0-600 psi • Adjustable pop-off valve • 10 ft. hose assembly for safe distance operation • NSN #: 6685-00-124-4336 • Milton CAGE #: 94894 • Complies with MIL-I-85352 (Part No. M85352/1)

P/N 12-05371



MILTON DIAL TIRE GAGE 0-60 PSI

45 degree dial type tire gauge has an internal diaphragm construction for greater durability. 45 degree chuck head comes with deflator valve and durable rubber boot.

MILTON 1/4 INCHES MNPT M-STYLE PLUG



1/4" M style MNPT plugs are the industry standard style plugs. These steel plugs have a 1/4" basic flow size, maximum air flow of 40 SCFM and a maximum inlet pressure of 300 PSI. P/N 12-05334

MILTON SCREW-ON AIR CHUCK

Screw-On Air Chuck......P/N 12-05363

MILTON 4 BLOW GUN DELUXE TIP KIT



Milton S-194KIT KWIK-CHANGE® PRO Series Safety Tip Blow Gun Kit - 235 Max PSI, (4-Piece) Tackle multiple pneumatic projects confidently with Milton's inclusive 4-piece S-194KIT PRO Series Safety Tip Blow Gun Kit, which includes an OSHA-compliant Safety Tip Nozzle and KWIK-CHANGE® Universal Tip System. The 5" angled stainless steel safety nozzle is designed with a side safety

vent, avoiding accidental damage or forced air in the event of the blow gun tip being obstructed. The slim nozzle is also ideal for reaching into tight or narrow spaces. The pistol grip type body of this blow gun offers a dual material, contoured grip for comfort and variable airflow trigger. Offers a pressure range of 50 to 235 PSI and 15.18 SCFM.

P/N 12-05320

MILTON ADJUSTABLE M STYLE POCKET BLOW GUN

M style adjustable pocket blow guns offer an easy grip, two finger control to adjust from full volume air flow to complete shut off. Knurled grip for secure handling even with oily or greasy fingers. Fits M style couplers, or any 1/4" body industrial style couplers. Maximum pressure of 150 PSI or 15.9 SCFM at 100 PSI. P/N 12-05321



MILTON MNPT ID HOSE END FITTINGS

Features: • Assemble new hoses or replace old fittings • Secure with a crimped ferrule for best results

1/4" MNPT 1/4" ID hose end fitting ... P/N 12-05324 1/4" MNPT 3/8" ID hose end fitting ... P/N 12-05325

MILTON 1/4 FNPT SAFETY COUPLER - M-STYLE



Milton S-99705 - 1/4" FNPT M style safety couplers are easy to use. Simply push once to stop airflow, twice to release plug. Safety couplers prevent possible injury or accidental disconnects. OSHA required in certain are



MILTON STANDARD BORE AIR CHUCK

SEE OUR COMPLETE SELECTION OF MILTON TOOLS ON OUR WEBSITE.

MILTON TOOLS - SCREW EXTRACTORS - PL

MILTON 1/4" MNPT MALE M-STYLE KWIK-CHANGE® COUPLER

Milton Industries is proud to be the creator and leader of the pneumatic industry standard M-Style coupler. This 1/4" MNPT M style brass coupler has a 1/4" basic

flow size, offering a maximum of 300 PSI. Comes with Buna-N seal and air flow of 40 SCFM. Both the body and sleeve are made of brass.

MILTON 1/4 INCH FNPT M-STYLE PLUG



1/4" FNPT M style plugs have a 1/4" basic flow size and air flow of 40 SCFM. Made of case hardened steel and plated to resist rust, M style plugs have a maximum pressure of 300 PSI...... P/N 12-05335

MILTON 1/4 NPT FILTER WITH POLYCARBONATE BOWL This (EX25F40A-02P) 1/4" NPT Air Filter features a polycar-



bonate bowl with a capacity of 7.4 oz. Bowl can be automatically drained under pressure, or manually by rotating drain valve at bottom of filter with a push-to-connect drain tubing connection that channels water safely away. Max Air Flow of 140 CFM combined with a max operating pressure of 145 PSI. Always install filter 20' feet down line of air compressor to allow air to cool and lessen the amount of water carried through the supply line. FRL components feature directional arrows to indicate the flow of air.P/N 12-05338

MILTON 1/4 NPT LUBRICATOR 5 OZ POLYCARBONATE BOWL



This 1/4" NPT Air Lubricator features a Polycarbonate bowl with a capacity of 4.56 oz. FRL Lubricator delivers a consistent mist of oil through the airline and extends tool life. Oil amount is easily adjusted by rotating dial at the top of the unit. FRL Lubricator can be refilled either by removing bowl or filling through oil fill cap on top. Max Air Flow of 175 CFM and a max operating pressure 145 PSI......P/N 12-05340

MILTON REGULATOR 1/8 NPT MINI WITH 5-120 PSI GAUGE



This 1/8" NPT Mini Air Regulator maintains consistent pressure and prevents overdriving tools. The FRL Regulator features 1 5/8" dial gauge readings in PSI and MPa, and includes a lockout knob that allows set PSI pressure. Adjustment ranges 5-125 PSI. Max Air Flow of 20 CFM and max operating pressure of 145 PSI. Gauge thread: 1/8" center mount.

P/N 12-05341

MILTON COBRA 50 FOOT FLEX HOSES



Milton flexible hybrid PVC air hose remains flexible down to -40 degrees Fahrenheit. This 50 foot hose is kink resistant and lays flat. Maximum working pressure of 300 PSI. Both 1/4" hose ends are brass with a bend

restrictor to provide strain relief for the hose.

Features: · Highest rated flexibility - lays flat · Solid brass hose ends unlike soft aluminum ends on green hose competitors • UV, oil and abrasion resistant • Maximum working pressure of 300 pounds per square inch

3/8" Hose......P/N 12-05345

MILTON SLIP SLEEVE FOR GAGING ELEMENT



Government - Slip-Sleeve Constant Bleed Detachable Milton Slip Sleeve For Gaging Element

P/Ň 12-05385 Slip Sleeve-Detachable Fitting P/N 12-05386

EASY OUT SCREW EXTRACTORS



Black Max spiral screw extractor grips screw firmly with its tapered, left-handed spiralflutes. Intended to remove screw manually with T-handle tap wrench or equivalent. Features: • Black oxide coating for maximum corrosion protection and cutting performance • Black oxide coating combined with a tough carbon tool steel construction ensures longer life • Extractor size is permanently etched on the tool for quick and easy reference. Specifications • To remove Bolts/Screws:

3/32" to 5/32" • Use Drill Bit Size: 5/64" • Shank Diameter: 1/8" • Point Diameter: 0.060"

Description	Part No.	Price
3/32" to 5/32"	12-02873	
5/32" to 7/32"	12-02874	
7/32" to 9/32"	12-02875	
9/32" To 3/8"and 1/8" Pipe	12-02876	
3/8" To 5/8"and 1/4" Pipe	12-02877	
5 Piece Set	12-02882	

RYOBI PLANER



The Ryobi cordless Hand Planer has the power of a corded hand planer when powers through the toughest jobs. The rear mounted "kickstand" keeps blades from contacting surfaces when the unit is placed shoe down between operations. The pommel front handle and rear handle designed with overmold for added comfort. Dust ejection

adjusts for left or right exhaust. All these great features are a part of the Ryobi ONE+™ system which has have 40 tools and batteries. Depth adjustment knob adjusts from 0-1/64". Dual carbide blades for smooth, accurate planning. Rear mounted "kickstand" keeps blades from contacting a surface when the planner is set down between aperations. Extended front for balance and accuracy. MFG Brand Name: Ryobi. MFG Model #: P610. MFG Part #: P610

.....P/N 12-02824 18 V Planer..... BI P100 ONE+ Nickel-Cadium 18-V Rechargable Battery P/N 12-02825 P131 ONE+ 18-V IN-Vehicle ChargerP/N 12-02826

RYOBI PLANER KIT Kit includes:

(1) 18 Volt Planer - The Ryobi cordless Hand Planer has the power of a corded hand planer when powers through the toughest jobs. The rear mounted "kickstand" keeps blades from contacting surfaces when the unit is placed shoe down between operations. The pommel front handle and rear handle designed with overmold for added

comfort. Dust ejection adjusts for left or right exhaust. All these great features are a part of the Ryobi ONE+™ system which has have 40 tools

(1) P100 ONE+ Nickel-Cadmium 18-Volt Rechargable Battery - The Ryobi ONE+ Nickel-Cadmium 18-Volt Rechargeable Battery provides extended run-time and works with all present and past Ryobi 18-volt ONE+ tools and chargers.

(1) P131 ONE+ 18-Volt In-Vehicle Charger - The Ryobi ONE+ 18-Volt In-Vehicle Charger is compatible with all past and present Ryobi 18volt ONE+ NiCd and lithium-ion batteries. It plugs conveniently into a vehicle's 12-volt DC outlet and takes less than an hour to charge the batteries fully......P/N 12-02827



MILTON COUPLER WASHERS

Milton Washer 768 for an M & T Style coupler. Comes in a pack of 10......P/N 12-05432

SEE OUR COMPLETE SELECTION OF MILTON TOOLS ON OUR WEBSITE.

Prices Subject to Change without Notice - Valid as of June 1, 2024. Please view our website for current prices.

MICROMETERS

ELECTRONIC MICROMETER



Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers,

but are robust enough to perform in situations where regular electronic micrometers failP/N 12-03414

ELECTRONIC MICROMETERS



Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers, but are robust enough to perform in situations where regular electronic micrometers fail.

Description	Part No.	Price
2-3" lp54 54-860-003-1	12-03410	
3-4" lp54 54-860-004-1	12-03411	
1-2" Water Resistant 54-860-002-0	12-03412	

ELECTRONIC OUTSIDE MICROMETER SET



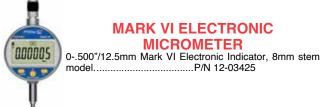
Quick, accurate, easy-to-use and coolant, water and oil resistant to IP54 standards, Fowler's Electronic IP54 Outside Micrometers offer the same features as Fowler's standard electronic micrometers, but are robust enough to perform in situations where regular electronic micrometers fail.

P/N 12-03413



MARK VI ANALOG ELECTRONIC INDICATOR

0-.500"/12.5mm Mark VI Electronic Indicator with Analog Display......P/N 12-03424



ADJUSTABLE MICROMETER STAND

A compact, well-constructed, folding micrometer stand with a unique locking mechanism that positions the micrometer over a 180° range for perfect use and viewing.......P/N 12-03423

ELECTRONIC XTENDER



The industries two most popular bore gage ranges combined in one easy-to-use ELECTRONIC set! All the same benefits included in the X-Tender Dial Bore Gage are now available with an electronic indicator providing inch/metric reading capability, preset size of master for absolute reading and minimum hold feature to lock on the bore size as the gauge is rocked in the part to be measured. P/N 12-03416

METRIC BORE GAUGE SETTING MASTER Using the new Fowler Bore Gage Setting



Using the new Fowler Bore Gage Setting Master and the included gage blocks you can now quickly and easily set virtually any bore gage from 0 to 150mm in diameter with an accuracy of .003mm. Gone are the numerous masters formerly required to accurately set your bore gage for use. Now with one setting master kit and the included gage blocks you can set your bore gage with ease. Each Fowler Bore Gage Setting Master Kit includes a bore gage setting



POLY-CAL ELECTRONIC CALIPER

Poly-Cal Electronic Caliper Inch/Metric/ Fraction. Range: 6"/150mm. P/N 12-03426



ELECTRONIC CALIPERS

Description	Part No.	Price
lv 6"/150mm 54-100-330-1	12-03417	
lv 12"300mm 54-100-332-0	12-03418	



XTRA-VALUE CAL AND DEPTH ATTACHMENT COMBO

Accuracy: .001"/.02mm. Range: 6"/150mm. Large east to read display. Resolution: .0005"/.01mm. Direct inch/metric conversion. Absolute/incremental measurement. 4-way measuring P/N 12-03427

SHOCKPROOF DIAL CALIPER AND DEPTH ATTACHMENT COMBO Tough shockproof design. 4-way measuring. Solid stainless steel construction. Silky-smooth



Tough shockproof design. 4-way measuring. Solid stainless steel construction. Silky-smooth movement throughout. 100" range per revolution. .001" reading dial face.

P/N 12-03409



MASTER BORE GAGE SET

Setting Bore gages is a breeze with Fowler's new Bore Gage Setting Master Kit! Using the new Fowler Bore Gage Setting Master and the included gage blocks you can now quickly and easily set virtually any bore gage from 0 to 6" in diameter with an accuracy of .0001". Gone are the numerous masters formerly required to accurately set your bore gage for use. Now with one setting master kit

ERS - MICROMETERS - KNOCK-OUT PUNCHES

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

FRACTIONAL DIGITAL CALIPER 3 INCH



Three universal systems of measurementGuaranteed accuracy to 0.001". Delivers accurate readings of inside, outside, step and depth measurements. This 3" caliper fits conveniently into your pocket for working in the field. Range 0-3" (0-76mm) Resolution 0.0005" (0.01mm or 1/64"). Accuracy 0.001" (+/- 0.02mm). Auto on/off feature preserves battery life. Free-wheeling friction roller advances and retracts slide. Extendable depth gage for use in slots and small holes. Replacement Battery - SR54 or LR54......P/N 12-02307



DIAL INDICATOR

0-1" Dial indicator with measuring resolution of .001"; equipped with mounting lug on back of body for multiple mounting optionsP/N 12-02709

STANDARD AND METRIC DIAL **INDICATOR**

AGD 2 series. Dial face reads in inch (black) or metric (red). Range: 1"/25mm. Graduation: .001"/.01mm. Reading: 0-100. Separated dial for Inch and Metric. Rotating bezel with clamp. Lugback included.

P/N 12-03659





PROFESSIONAL GRADE MICROMETER

0-1" Professional grade micrometer with measuring resolution of .0001"; carbide anvil faces for long life and durability. Includes plastic case.

P/N 12-02707



DIGITAL SLIDING T-BEVEL

Takes the guesswork out of angle duplication and eliminates the problems associated with analog readings and manual measurement transfer. This is the first and only digital T-bevel on the market. It is ideal for measuring, storing and transferring inside and outside angles when building cabinetry, furniture and picture frames;

installing tile and more. This highly accurate tool offers easy-to-read measurements via a large LCD display and integrates an 8" stainless steel blade with a steel locking knob. Practical function buttons make it ultra-convenient for setting and transferring measurements instantly.

P/N 12-03226

OFFSET KNOCKOUT PUNCHES (WITCHES FINGER)

Can be used to knock out those hard to reach stubborn fasteners.

Available in 1/8", 5/32", 3/16", and 1/4" tip diameter. Also available in a 4 piece set.

Size	Part No.	Price
1/8"	12-02927	
5/32"	12-02926	
3/16"	12-02928	
1/4"	12-02929	
Set of 4	12-02925	



"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 drillpress 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 drillingP/N 12-20815

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.

PLATE NUT DRILL JIG

One piece heat treated tool steel jig. Use for accurate & fast drilling of rivet holes for plate nuts. Has flexible handle design. Use for both on lug (both holes on 1 side) & two lug (holes on both sides) style nut plates -K1000 & K1100 style nutplates.

#6 Plate Nut Drill Jig	P/N 12-03041
#8 Plate Nut Drill Jig	
#10 Plate Nut Drill Jig	P/N 12-03043



DIGITAL PRECISION PROTRACTOR

Displays absolute and relative angle measurements in a large, easy-to-read LCD window. This display offers a hold function and can be inverted 180° for easy

reading when the tool is upside down. It features a 6" (150mm) stainless steel pivoting protractor arm with a knurled locking nut and one-button zero calibration, which ensures accurate readings every time. Take the guesswork out of measuring, marking and reading angles on your next woodworking or home improvement project. The UltraTECH Pro-ANGLE Digital Protractor displays absolute and relative angle measurements in a large, easy-to-read LCD window. For user convenience and comfort, the display offers a hold function and is easily inverted, or flipped, 180 degrees for reading upside down. Angles in any plane can be measured with accuracy to 0.1 degree and 0.05 degree resolution anywhere within a 0.00 to 180 degree range, making this tool useful for many applications.....P/N 12-03224



DIGITAL ANGLE FINDERS

These new angle finders combine the ruggedness of analog rulers (standard and metric) together with the digital technology needed for complete accuracy when measuring inside, outside and reverse angles. Precise measurements prevent waste by facilitating exact miter

cuts. One button activates the reverse angle function, a hold button digitally saves the measurement and the large ergonomic locking knob saves the angle manually. A big LCD readout makes measurements extremely easy to read while an innovative center check notch enables exact ruler placement marking. The Models 822 (Patent Pending) are ideal for framing, custom furniture-building, stair and patio construction, flooring, tiling basically all woodworking, carpentry and contractor needs in the shop or in the field.

5 inchP/N	12-03223
10 inchP/N	12-03222

TO

NOMY AIRCRAFT TO



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. Each squeezer includes the voke of the coordinating size.

Description	Part No.	Price	Description	Part No.	Price
1" Squeezer	12-01460		1" Yoke	12-01457	
2" Squeezer	12-01461		2" Yoke	12-01458	
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. Includes a 3" Yoke. 1.5" is sold separately.P/N 12-01548



3" Yoke

QUICK CHANGE PIN

Quick Change Pin. Makes changing yokes quicker & easier. 3/4" Reach......P/N 12-01798



RIVET SET FOR SQUEEZER

FLUSH & CUPPED) - Made of steel and heat-treated for long wear and tool life. .187" (3/16") shank. • 2 Flush sets required for Flush Head Rivets • 1 Flush and 1 Cup required for Round Head Rivets. • Sold as individual items / not a pair

Description	Part No.	Price
Flush 1/8	12-01466	
Flush 3/16	12-01554	
Flush 5/16	12-01556	
Flush 3/8	12-01557	
Flush 7/16	12-01558	

Description	Part No.	Price
Flush 1/2	12-01559	-
Cupped 1/8	12-01561	
Cupped 5/32	12-01562	
Cupped 3/16	12-01563	



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 12-01468P/N 12-01564 '.....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

· 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

Use standard Phillips or Slotted insert bits • Rivet gun required • 1/4" hex adapter not included. 4" ToolP/N 12-01567



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 3,000P/N 12-01470



HEAVY DUTY RIVET CUTTER

This heavy-duty rotary cutter is designed to quickly and easily shear aluminum rivets. Just insert the rivet into the correct sized hole and set to desired length; adjustable for 1/4" to 3/4" long rivets in 1/16" increments. Cuts diameters of 3/32", 1/8", 5/32", 3/16", 7/32", and 1/4". P/N 12-01471



ECONOMY RIVET SET

2.5" Straight & Offset Rivet. Made of steel and heattreated for long tool life. The precision made cups are

		Oti digiti of or	// / / / 02010
2.5" Straight	1/8"	-	P/N 12-02319
			P/N 12-02320
			P/N 12-02321

ALUMINUM BODY MINI AIR VACUUM

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 removed for cleaning......P/N 12-01474



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



DOGLEG DEBURRING TOOL

Swivel action of this tool makes deburring holes fast and easy. Shaft includes a 1/4"-28 threaded holder. *Flute De-burring cutter sold separately - P/N 12-00625 P/N 12-01478

	Accessories
Replacement Deburring Bit	P/N 12-03755
Swivel Handle Only	P/N 12-00623
Extension Shaft only	P/N 12-00624
HSS 3 Flute De-burring cutter	P/N 12-00625

CLECO PLIERS Used in limited access areas, requires less travel per activation.....P/N 12-01480

CLECALL STEEL UPRIGHT

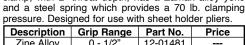


CLECO PLIERS

Clecall Upright Steel Cleco Pliers: Faster to use / Easier to Activate. Spring Loaded to open with less effort. Latest design accommodates 1/4" Cleco width. Forged steel for heavy duty use. Handle Compression distance reduced further for more comfort. Reduce fatigue and wrist pain. Vertical profile installs clecos in

tight areas with ease. Install clecos on upside down surfaces easily..... Economy Steel PliersP/N 12-03756

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



Description	Grip Range	Part No.	Price
Zine Alloy	0 - 1/2"	12-01481	
Steel 2"	0 - 1/2"	12-01482	
Steel 3"	1/4" - 5/8"	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.

CYLINDER BASE NUT WRENCHES

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



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.

Type A 1/2"	P/N 12-01525
Type A 9/16:	P/N 12-01568
Type A 5/8"	P/N 12-01569
Cylinder Base Nut Wrench Set	P/N 12-02302

Also available in a kit.

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. P/N 12-01498 is pictured.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01494		#10 13-1/4"	12-01499	
#21 6-1/4"	12-01495		#21 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 (INVERTED TYPE)

For drilling an accurate hole in overlapping sheets. The inverted type duplicator allows you to locate a hole from the back of an overlaping sheet. #10 #21 #30 #40 1/4" drill sizes, 6-1/4" or 13-1/4". P/N 12-01507 is pictured.

Description	Part No.	Price	Description	Part No.	Price
#10 6-1/4"	12-01505		#10 13-1/4"	12-01510	
#21 6-1/4"	12-01506		#21 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









12-01775 12-01774

12-01773 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			3/16"	12-01773	
1/4"	12-01774		lΙ	1/8"	12-01771	



EDGE BREAKER



AIR SWIVELS & REGULATOR TOOLS



BRASS RIVET SET



RIVET GUN SHAFT REDUCER



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

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

T

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

These are used to extend a straight chuck drill to 1/4-28 female threads.

	2"	.P/N	12-01535
	4"		
r	6"		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.

2"F	P/N	12-01541
4"F	P/N	12-01542

Carlin .

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)



5.5" STRAIGHT & OFFSET RIVETS

Made of steel and heat-treated for long tool life. The precision made cups are highly polished. 401 shank. Length: 5.5". Cup Sizes: 3/32", 1/8", 5/32" & 3/16". For AN470 rivets.

Size	Straight	Price	Offset	Price
3/32"	12-02326		12-02330	
1/8"	12-02327		12-02331	
5/32"	12-02328		12-02332	
2/16"	12-02320		12-02333	



Aluminum

ALUMINUM & NYLON RIVETS

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. • Surface: 1" • Length: 3 1/8"



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



DNOMY AIRCRAFT TO



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	вРМ	Capacity	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 RIVET ECONOMY

COLLAR CUTTER

se with your rivet gun to easily remove Huck and Hi-Lok type collars. Shank: 0.401 Size includes 1/8", 5/32", 3/16" & 1/4" Overall Length: 5 1/2"

1/8"	P/N 12-02275
	P/N 12-02276
3/16"	P/N 12-02277
1/4"	P/N 12-02278

ECONOMY FLUSH SET

5.5" & 7.5" Flush Set Made of steel and heat-treated for long tool life. Faces are polished to a high luster for smooth, precise riveting. .401 shank Surface: 1" Length: 5.5" & 7.5"

5.5:"	P/N 12-02273
7 5"	P/N 12-02274

JIFFY RIVET SETTERS

ECONOMY JIFFY STRAIGHT RIVET SETTER
For use with "Jiffy" style rivet gun. Made of steel and heat-treated for long tool life. The precision made cups and highly polished. 401 shank, Length: 1-3/16", Cup Sizes: 3/32", 1/8", 5/32" & 3/16", For AN470 rivets

3/32" x 1-3/16"	P/N 12-02381
1/8" x 1-3/16"	P/N 12-02382
5/32" x 1-3/16"	P/N 12-02383
3/16" x 1-3/16"	P/N 12-02385

ECONOMY JIFFY OFFET RIVET SETTER

For use with "Jiffy" style rivet guns. Made of steel and heat-treated for long tool life. The precision made cups are highly polished. 401 shank, Length: 1-3/4", Cup Sizes: 3/32", 1/8", 5/32" & 3/16", For AN470 rivets

3/32" x 1-3/4"	
1/8" x 1-3/4"	P/N 12-02388
5/32" x 1-3/4"	P/N 12-02389
3/16" x 1-3/4"	P/N 12-02390

ECONOMY RIVET GUN PUNCH

For use to remove rivet after collar is split. Made of steel and heat-treated for long tool life. 401 shank, Length: 3-1/2", Punch size includes: 3/32", 1/8", 5/32" & 3/16" & 1/4"

3-1/2" x	1/8"	P/N	12-02392
3-1/2" x	5/32"	P/N	12-02393
3-1/2" x	3/16"	P/N	12-02394
3-1/2" x	1/4"	P/N	12-02395

ECONOMY JIFFY FLUSH RIVET SETTER - For use with "Jiffy" style rivet gun, polished flush surface Length: 1-3/16", For AN470 Rivets

P/N 12-02386

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



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

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**

	Size	Straight	Price	Offset	Price
	3/32"	12-02051		12-02322	
	1/8"	12-02052		12-02323	
•	5/32"	12-02053		12-02324	
	3/16"	12-02054		12-02325	

RED BOX 7.5" RIVET SET



İ	Size	Straight	Price	Offset	Price
.	3/32"	12-02334		12-02338	
1	1/8"	12-02335		12-02339	
ı	5/32"	12-02336		12-02340	
1	3/16"	12-02337		12-02341	

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 \times 6.5" long \times 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 4140 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

_	inioidado dot donoti ana	, mon noy.
	1/8"	P/N 12-01785
	5/64"	P/N 12-01786
	3/32"	P/N 12-01787

ECONOMY DRILL EXTENSION THREADED



This threaded extension allows you to chuck threaded drill bits or countersinks into a quick-change chuck. It features a 5/16" quick change shaft on one end, and 1/4" -28 female threads on the other. The overall length of the extension is 3.46" ... P/N 12-01781

60° C-SET



Excellent for limited access areas. • 60° Angle • .401 shaft P/N 12-01777

FORD WRENCHES

• General-purose adjustable wrench • Sliding Jaw • Forged from Crescent special Analysis Tool Steel • Chrome-plated • Precision Machined



9" WrenchP/N 12-03795 11" WrenchP/N 12-01784 15" WrenchP/N 12-03796

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 tubesP/N 12-01792

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



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 **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 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 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 HEAVY DUTY AIR DRILL



- 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



- 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

OSCH POWER TOOL

BENCH GRINDER DISC - VERY FINE



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: 8" x 1/2" • Grain: A/O • Grade: Very Fine • Max RPM: 3,000 P/N 12-00849



7"CUTTING WHEEL

1/2" X BRE 1/16"

Oxide abrasive wheel - fine abrasive for burrfree cutting of thin wall tubing and applications which require a fine finish.

•Wheel Size: 7" x 1/16" x 1/2" • Max RPM: 8,700 · Weight: 6lbs · Standard Grades: A60TBE 3C14 P/N 09-02564

BOSCH TOP HANDLE JIGSAW



Toolless Blade-Change System - Fast insertion, blade ejection lever eliminates need to touch hot blade. Most secure jigsaw clamping system.

Powerful 7.0-Amp Jigsaw – Top jigsaw amp rating. • Variable speed – Dial sets maximum speed and accelerator trigger controls operating speed. • Constant Response™ circuitry – Maintains desired speed for consistent performance and precision. • Aluminum gearbox with insulated cover • Toolless Blade-Change System – Fast insertion, blade ejection lever eliminates need to touch hot blade. Most secure jigsaw clamping system. • Internal Precision Control - Precision-machined plunging system and low-vibration design for enhanced accuracy and extremely smooth operation • Large sturdy die-cast foot with steel insert extremely smooth operation. • Large, sturdy die-cast foot with steel insert and on-board bevel wrench. • Exclusive multi-directional blade clamp provides superior grip of T-shank blades. (JS470E does not accept U-Shank blades) • Four orbital-action settings -Different blade strokes for smooth to aggressive cuts. • Adjustable dust blower keeps cutting line clear. • Ergonomic top handle with soft-grip areas for solid, comfortable grip. • Ambidextrous lock-on button – For steady long cuts and user comfort and control......P/N 12-03215

BOSCH 3-1/4 INCH PLANER 120V



Powerful 6.0 amp motor, 16,500 RPM for fast stock removal and a smooth finish. Electronically-counterbalanced, single-blade system automatically positions blade at ideal cutting angle. Reduces drag and provides fast operation and a smooth finish. Eliminates uneven planing caused by misaligned blades. Equipped with Bosch Woodrazor™ micrograin carbide blades. Ratcheting depth knob that allows for fool-proof setting of depth increments from 0" to 1/16" (1.5 mm). Also features an edge guide fence. A protective shield covers the section of blade not in use. Amperage: 6.0. Cord Length: 10'. Country of Origin: Malaysia. No Load RPM: 16,500. Planing Depth: 0 - 1/16" (1.5 mm). Planing Width: 0" to 3-1/4". Rabbet Depth: 5/16". Rating: 120V AC. Shoe Length: 11 - 1/8". P/N 12-02823

BOSCH TOP HANDLE JIG SAW 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 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

AIRCRAFT STATIC TEST ADAPTER



SA3Y-P-UNI-2 Aircraft Static Test Adapter. • Automatically attaches to aircraft fuselage • High pressure hoses with quick release fittings • Press to release button for static adapter removal · Safety check valves for power failure and system leaks · High impact yellow case with internal electric vacuum pump · Designed to fit most general & military aircraft static ports

Comes with 1/2 in center suction cup. Accessory kits are available for specific static ports • Power input: 115 V AC 50/60 Hz. Continuous operation • Custom voltages available: 12vdc, 28vdc, 115 vac & 220 vac • Size: 12" x 10" Wt. 8.5lbs.

P/N 13-20266

BOSCH 4-1/2 INCH ANGLE GRINDER



Features:

6 Amps, 11,000 RPM • Lock-on/off switch — for extended use applications • Service MinderTM brushes — Eliminates guesswork, stops the tool when preventiative maintenance is required • Epoxy Coated Field Windings — Provides ultimate protection against abrasive dust and metal debris • 5/8" -11 Spindle — wide flexibility for mounting most popular accessories
• Spindle Lock — For quick wheel changes • Double insulated, UL listed, complies to OSHA • 2-Position auxiliary handle — specifically designed and angled to a "natural" position for maximum comfort and

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

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



840

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 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, 971013-971018-18mm, 971014-14mm, 13mm. 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 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
Recommend 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



3/8" DRIVE PISTOL GRIP IMPACT WRENCH

ľ	SX821A Specification	
ı	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



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
Ü	Min. Hose Size (I.D.)	3/8
į.	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 springP/N 12-01935

SUNEX TOOLS

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

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, 8844-13/16P/N 12-01966

SUNEX DELUXE CREEPER



• 1" Rugged steel tube construction • Oversize frame for added comfort • Tapered frame and head reast 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

SUNEX SOCKET DRIVES



Radius corner design causes the socket to grab the sturdy wall, or flat, of the fastener instead of grabbing the corners, resulting in less corner wear on the fastener. CR-MO alloy steel for long life.

Drive	Socket	Description	Part No.	Price
3/4"	41mm	Sunex 441MD	12-03448	
3/4"	46mm	Sunex 446MD	12-03450	



SUNEX REDUCING SOCKETS

CR-MO alloy steel for long life. Steel ball retainer on male end. Will meet a variety of needs. Lifetime warranty. Fully guaranteed.

2302 1/2"(f)x3/4"(m).....12-03452



SUNEX SHORT AIR HAMMER

- · 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



SX-230A DIE GRINDER & ACCESSORIES

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



X-227B HEAVY DUTY **METAL SHEARS**

Muffled handle exhaust. Heavy-duty, ball and needle construction.

Pneumatic.....P/N 12-01122



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 spread (in.) -7 P/N 12-01957 Specifications: Maximum reach (in.)-5.5,

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. • Tips available on special request.

P/N 12-01933

SUNEX 3 PIECE PROFESSIONAL ANGLE BLADE PRY BAR SET



Includes angle blade pry bars in lengths of 12", 17" and 25" and boast a handle specifically designed to ensure a "no slip" grip allowing the user maximum leverage and control. Each pry bar also has

hardened, tempered blades for unmatched strength and durability. Specifications · Weight: 4.1lbs · Length: 25.8" · Height: 1.9" P/N 12-02451

SUNEX 3PC FLEXIBLE PICKUP TOOL



Helps to get you into those tight spots and help you with removal, fastening, and pick up of fasteners and parts. **Features**: Includes: 1/4" Magnetic Bit Driver, 1/4" Socket Driver, and a 2 in 1 Magnetic Claw Pick-Up Tool. Flexible ends

bend to desired angles. Extra long 24" length shafts. 1/4" Bit Socket accepts all standard bits. 1/4" Socket Driver can be used with all 1/4" sockets and bit sockets.P/N 12-02450

SUNEX CABLE SPRING CLAMP PLIERS

24" flexible neck cable for hard to reach areas. Clamps lock in open position. Removes plastic and metal self-tightening (11/16" - 2-1/2" diameter) hose clamps. Extended clamp on allows for added extension. Lifetime warranty (does not include cable and spring).

P/N 12-03454

SUNEX 1/4" 0.5HP ANGLED DIE GRINDER



Sunex HD® 1/4" 0.5hp line of Die Grinders provides all of the durability, features, and power required for today's demanding applications. With the powerful 0.5hp motor, you are given the torque to get through even the toughest material and twice the horse power of the average die grinder. The speed control dial and soft

composite handles enhances your ability to complete any job quickly and efficiently. With these top of the line products, you will find all of the features and speed you need to get the job done right the first time. 2 Year Limited Warranty. Weight lbs.(kg): 1.5 (0.7)P/N 12-03192

SUNEX 1/4" 1.0HP SUPER **DUTY DIE GRINDER**

The new Sunex HD® 1/4" 1.0hp Super Duty Die Grinder has all the durability, features, and power mechanics want in an industrial die grinder. With

the powerful 1.0hp motor, you're provided with the torque needed to get through the toughest of materials. The no slip Erickson Industrial Collet, allows you to work efficiently, as it holds your accessories securely without slippage. You would normally pay twice as much for a tool of this caliber. 2 Year Limited Warranty. Weight lbs.(kg): 1.7 (0.77).

P/N 12-03193

3-IN-1 SHEET METAL ROLLERS



These Sheet Metal Roller Presses have 6 adjustable hardened fingers, spring loaded sheet hold-down, heavy cast iron frame, grooves for wire rolling, 1 1/4" slip rolls, adjustable back gauge. Works up to 20 gauge sheet metal. Stand not included but available for the 30" Roller only.

Model	Size	Part No.	Price		
SP3-1-3	30"	12-03467			
SP3-1-40	40"	12-03469			
SP3-1-52	52"	12-03470			
Roller Stand for 30" RollerP/N 12-03468					

POWER BEAD ROLLER MACHING

Heavy Duty Power Bead Roller, works off 110v gear drive motor and has a 43" throat depth with an adjustable fence and includes floor stand, die rack, 2 step dies, 2 bead dies and a 45 degree tipping die.

P/N 12-03472

HAND SHEARS



Throatless design, adjustable work hold down, arched top blade allows for effortless cutting throughout the stroke and indexable bottom blade. Up to 3/16" steel, up to 3/8" round bar.

Description	Part No.	Price
Hand Shear 5" Model SPHS5	12-03459	
Hand Shear 8" Model SPHS8	12-03460	
Hand Shear 10" Model SPHS10	12-03457	
Hand Shear 12" Model SPHS12	12-03458	



ROTARY SHEAR

Shape cutter, easily cut any shape up to 1/8" thick, forged steel frame, ratcheting head, adjustable cutter, adjustable work stop.

P/N 12-03463

3-IN-1 SHEET METAL ROLLER

This Sheet Metal Roller Press is 12" length with 5 adjustable hardened fingers, material hold-down, back gauge, 1-1/4" slip rolls with 1/16", 1/8" and 3/16" grooves for wire forming. Works up to 20 gauge sheet metal.

P/N 12-03466

HAND SHEAR MULTI PURPOSE CUTTER

5" Top length, throatless design, adjustable work hold down, geared reduction handle makes cutting easy.

P/N 12-03464



MANUAL SHEET METAL CORNER NOTCHER

Heavy cast iron frame, adjustable work stops, 4 x 4 blades adjustable blade gap, high chrome blades, adjustable gibs for long life. P/N 12-03461



SQUARE NOTCHER

Foot operated, 3" x 3" blades, adjustable work stops, adjustable blade gap. 16 Gauge. P/N 12-03465



52 INCH FOOT SHEAR

52" Blade length, cast iron frame, front arm supports, high carbon blade, adjustable blade gap, front squaring arm with scale, back gauge with inch and metric scale.

P/N 12-03462



ENGLISH WHEEL THROAT DEPTH

Heavy Duty Construction, Quick Release Lower Anvil and Includes Floor Stand. * Part Number 12-03474 - Can Be Used For Rolling, Beading and Forming Foot Operated Height Adjustment.

Model	Description	Top Wheel	Ball Bearings	Includes	Part No.	Price
WFEW-2	English Wheel 28" Throat Depth With Stand	8"	Precision	5 Pieces Radius Anvils And One Flat Anvil	12-03473	
WFEW45T	English Wheel 43" Throat Depth*	6"	Super Wide 3" Anvils Precision	4 Top Wheels And 10 Lower Anvils	12-03474	

SLIP ROLL

12" Length, 1" diameter hardened rolls, 1/16", 1/8" 3/16" wire grooves. 20 Gauge. P/N 12-03486



24 INCH 20 GAUGE

SLIP ROLL 24" Length, 1-1/2" diameter rolls, solid precision ground rollers, heavy cast iron frame, quick release top roll, hardened steel gears, wire grooves for wire rolling. 20 Gauge. P/N 12-03487

WOODWARD-FAB ELITE SHEET METAL / WIRE SLIP **ROLLER 24 INCH**

24" Length, 2-3/8" diameter drive rolls, 2-1/2" rear adjustable roll. Uses single front mounted hand wheel for adjusting the rear roll. Uses single hand wheel to adjust the bottom roll for material thickness, roll tapers up to 15 degrees, fully enclosed gear box, cast iron end plates, wire grooves for wire rolling. Floor stand included.

16 Gauge.P/N 12-03488



SHOP PRESSES

Hydraulic hand pump, press plates included 7" stroke, easy read gauge. 10 Ton - 14 1/2" inside clearance.

Model	Description	Stroke	Inside Clearance	Part No.	Price
PR102	10 Ton Shop Press	7"	10 Ton - 14 1/2"	12-03492	
PR103	12 Ton Shop Press	7"	12 Ton - 18 1/2"	12-03493	
PR104	20 Ton Shop Press	7 1/2"	20 Ton - 19 1/2"	12-03494	

2 INCH PIPE NOTCHERUse with any hand held drill motor or drill press, create any angle saddle notch on pipe for weld fit up, uses standard hole saw blades up to 2 1/2", compound angle adjustment. Holds up to 2" pipe, uses up to 2 1/2" hole sawsP/N 12-03495



PIPE / TUBE NOTCHER

Solid steel construction, use with any 1/2" hand drill, accepts standard hole saw cutters, hardened and ground spindle, superior needle bearing support, adjustable angle to 50 degrees mount to bench top or clamp in vise. 3/4 - 3" O.D. Pipe/tube.

P/N 12-03496



TRACE-A-PUNCH NIBBLER

1 1/2 Hp, 110 V, 6 3/4" Throat Depth, Cuts Any Shape Metal Or Plastic. 1/8" Maximum Thickness. P/N 12-03497



TRACE-A-PUNCH NIBBLER

3 HP, 220/440 V, 3 phase, 16" throat depth, cuts any shape metal or plastic. 3/16" Maximum thickness......P/N 12-03498

PLANISHING HAMMER

26" Throat depth, quick adjust anvil height. Includes floor stand with handy retractable wheels, industrial hammer at 4600 beats per minute, includes in line oiler, pressure regulator and foot pedal. Up to 1/16" steel.

P/N 12-03475

PLANISHING HAMMER

Uses shop air 50-100 psi 4 cfm, 19-5/8" throat depth, features quick adjust anvil height/pressure, includes floor stand, 3 anvil, air motor, foot pedal. 16 Gauge Mild Steel. P/N 12-03476



L WORKI

SHRINKER / STRETCHER MACHINE



Ideal for creating repair panels for wheel openings, winshields, etc., Produce curves as tight as 3" radius, drilled bottom for bench mounting or clamp in a bench vise. Cast iron frame. 18 Gauge mild steel, 16 gauge aluminumP/N 12-03477



DEEP THROAT SHRINKER STRETCHERS

Adjustable StandP/N 12-03479

WOODWARD-FAB



BOSS16 BOX & PAN BRAKE

Maximum box depth 4", removable fingers - 2", 3", 4", bend angle stop 0 to 130 degrees, floor stand included, counterweight included, upper beam is adjustable for radius bending. 16 Gauge Mild Steel, 20 Gauge Stainless SteelP/N 12-03480



12 INCH 20 GA BOX & PAN BRAKE

12" Length, 5 hardened, removable fingers, cam lock handle. 20 Gauge.....P/N 12-03481

24 INCH 20 GA BOX AND PAN BRAKE



Solid heavy duty construction, reinforced frame, hardened and ground fingers, finger to bend leaf gap can be adjusted, maximum box depth, 5 removable fingers. 20 Gauge......P/N 12-03482

EURO BRAKE



50" Box and Pan Brake, 14 Gauge Capacity Mild Steel, Air Cylinder Assist "No Need for Weights", Adjustable Hold Down Force, Adjustable Bend Gap, Foot Operated Locking Hold Down, Hardened and Ground Fingers plus removable lower fingers for custom bends. 14 GaugeP/N 12-03483

MODEL S TURBO BURR



55,000 rpm, 1/4" air hose connection, 60 to 120 psi, 5 to 11 cfm, feed up to 2" per second. Ideal for deburring and edge finishing, puts a safety edge on sheet metal in one pass. .015" Minimum material thickness. P/N 12-03484



WELD SHAVER
Removes both flat "butt" welds and inside 90 degree corner "fillet" welds. Uses carbide inserts , milling type cutter head. Remove weld beads up to 1/2'

P/N 12-03485

S – GRINDERS – POLISHERS – SANDER



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 craftmanship 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. -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		

NYLON MALLET



Nylon mallet works great for shaping metal. **Specifications**: • Head Length: 3 1/2" • Face Diameter: 1 1/2" • Hammer Length: 10"P/N 12-02895

SPLIT-HEAD HAMMER - NO FACE



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. Die moving or positioning. Assembly. Electric Motor Repair. Propeller Repair. Foundry.

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

VAN SANT MULTITOOL ATTACHMENTS

The Multitool belt and disc grinding attachments for your bench grinder are must-have tools for any fabricator! These versatile tools remove material up to 5 times faster than with the equivalent grit grinding wheel. Belts change in seconds from grinding, to sand deburr or polish. Quality construction is backed by a 1-year warranty. The attachments are all available with motor options to suit the hobbyist or the professional. Includes 1 belt and 1 disc. Fits 1/2HP or more grinders with 1/2" or 5/8" shaft. Visit our website for a Compatability Template in PDF



MT362 MULTITOOL GRINDER ATTACHMENT (2"X36" Belt and one disc)

P/N 12-02064



M482 MULTITOOL GRINDER ATTACHMENT

(2"X48" Belt and one disc)

P/N 12-02068



M462 MULTITOOL GRINDER ATTACHMENT

(4"X48" Belt and one disc)

P/N 12-02070



DISC GRINDER MITER ATTACHMENT

bench grinder are must-have tools for any fabricator! These versatile tools remove material up to 5 times faster than with the equivalent grit grinding wheelP/N 12-02071

VAN SANT VISE AND GRINDER MOUNT WITH TABLE RECEIVER



The included tool mount is constructed from 2x2 3/16 wall square tubing and a 3/8 inch thick steel plate measuring 8.5 x 9.5 inches. The mounting plate features both 90 and 120 degree slots to accommodate a wide variety of

tools, or you can drill your own holes as needed.

Specifications: • Weight (pounds): 18 • Dimensions (LxWxH): 13" x 9.5" x 2.5".....P/N 12-05413

VAN SANT WALL MOUNT RECEIVER

Completely free up work surfaces and eliminate floor space wasted on stands with the wall mount tool receiver. Featuring a 4 x 8 x 1/4" thick mounting surface with 3 mounting holes, it can be mounted to any vertical surface in the shop. In addition to a 5/8" detent pin, the mount also features two sets of jam bolts to produce a rock-solid fit for the receiver tube.

P/N 12-05412

The Multitool disc grinding attachment for your

VAN SANT - VISE AND



GRINDER MOUNT WITH WALL RECEIVER Completely free up work surfaces and eliminate floor space wasted on stands with the wall mount tool receiver (sold separately). Featuring a 4 x 8 x 1/4 inch thick mounting surface with 3 mounting holes, it can be mounted to any vertical surface in the shop. In addition to a 5/8

inch detent pin, the mount also features two sets of jam bolts to produce a rock-solid fit for the receiver tube.

The included tool mount is constructed from 2 x 2 3/16 inch wall square tubing and a 3/8 inch thick steel plate measuring 8.5 x 9.5 inches. The mounting plate features both 90 and 120 degree slots to accommodate a wide variety of tools, or you can drill your own holes as needed.

P/N 12-05414

VAN SANT TABLE MOUNT RECEIVER



Keep your work surface clear and eliminate the need for dedicated machine stands with this handy receiver mount. Featuring a 6 inch square mounting surface with 5/8 diameter holes on 4 in centers, it can be easily attached to your own workbench, Buildpro, or Certiflat welding tables. The mount also features two

sets of jam bolts to produce a rock-solid fit. The receiver is designed to accept 2 x 3/16 inch wall square tubing......P/N 12-05410

VAN SANT GRINDER MOUNT FOR RECEIVER

Vans Sant Grinder Mount Plate can be used with Receiver Mount (sold separately) to keep your bench grinder, vise, or any other tool close at hand, but not take up valuable bench

space. Use the existing 1/2 inch wide slots in the 8.5 x 9.5 inch plate, or drill your own mounting holes. Built from 2 inch x 3/16 wall square tube and 3/8 inch plate and finished in black zinc

P/N 12-05411

BAILEIGH METAL TOOLS

BAILEIGH MANUAL BENDER FB-4



Baileigh's FB-4 form bender is a useful tool for press bending ornamental iron, mild steel, aluminum and other metals. This flat bar bender is a manual press brake and can create 90 degree bends by simply turning a hand lever until the desired angle is accomplished.

This metal bender is perfect for hobbyists, ornamental iron artists, and much more. Of course this is not a production bender, but is perfect for small runs or those one off applications. • Capacity: 3/16" • Shipping Dimensions (L/W/H): 17"/7"/8" • Shipping Weight: 19 lbs.

P/N 13-08987

BAILEIGH MANUAL ROLL BENDER R-M3 Baileigh The R-M3 metal ring roller is



Baileigh The R-M3 metal ring roller is perfect for any typical sheet metal shop for bending small rod up to ¼". Metal artists, technical schools, and home shops can find hundreds of uses to keep this well built angle roll in use.

This single pinch metal ring roller can be bench or pedestal mounted. It has fine adjustment for the top roll and to power this machine there is a manual hand crank.

Capacity Solid Round: .25" • Capacity Flat Bar: 1" (.1875 • Minimum Diameter: 3" • Handle Length: 13.5" • Power Requirement: Manual • Shipping Dimensions (L/W/H): 15" / 7" / 8" • Shipping Weight: 18 lbs P/N 13-08975

BAILEIGH MANUAL ROLL BENDER R-M7



Baileigh Industrial's Roll Bender R-M7's small size makes it highly portable and versatile. Although not for rolling complete circles, it makes quick work of large radius bends. Many different tooling options are available as well.

available as well.

Capacity / Size / Diameter: • Pipe - 1.5" / 20" dia
• Round Tube - 1.25"(.078") / 31.5" dia • Square Tube
- 2" / 70" dia • Rectangle Tube - 1x2" / 30" dia • Flat
bar - Easy Way / 10" dia

Specifications: • Roll adjustment: Manual • Pinch: Single • Shaft Center Distance (lower rolls): Adjustable • Driven Rolls: 1 • Speeds: N/A • Motor: N/A • Power Requirements: Manual • Shipping Weight: 150 lbs.

P/N 13-08976

BAILEIGH MANUAL ROLL BENDER R-M10



Baileigh's R-M10 tube roller has a powerful manual drive system that has a maximum capacity of 1-1/4" (.078" wall) round tubing capacity (mild steel). It comes standard with segment rolls that allows for many different types of flat bar, some angle iron and some square to be rolled. This roll bender has optional rolls for round tube and pipe, as well as other profiles.

This tube roller is typically in stock for fast deliveries. For further information on the R-M10 roll bender, please contact your Baileigh representative.

Capacity / Size / Diameter: • Pipe - 1 " (Sch.40) / 28" dia • Round Tube - 1.25"(.078") / 31.5" dia • Square Tube -1.2" (.078") / 35" dia • Angle Iron - 1.25" (.157") / 30" dia • Solid Square - .75" / 20" dia • Solid Round - .875" / 20" dia • Flat Bar Easy Way - 2" / 15.75" dia • Flat Bar Hard Way - .75" / 6.5" dia

All Specs based on 60,000 PSI (42 kg/mm2) Tensile Strength - Mild Steel. Specs are to be used as a base line for purchase purposes only. Baileigh Industrial cannot control Variations in Material.

BAILEIGH MANUAL TUBE BENDER RDB-10



The RDB-10 manual hand tube bender is the perfect bending machine for bending air lines, brake lines, fuel lines, and general hydraulic lines. Thus, if you're into building or repairing race cars, auto and airplane repair or restoration, an automated machinery builder, or much more, the RDB-10 manual bender will save you time and money from the moment you use it.

This manual tube bender comes standard with 10 different size combinations from 1/4" to 5/8" OD in either 3 or 5 times the diameter radiuses. This manual tube bender works great with mild steel, certain coppers and aluminums, as well as stainless steel. It comes

BAILEIGH MANUAL TUBE BENDER RDB-25



The RDB-25 manual tube bender is the perfect machine for hose hobbyists that need to bend tube on a budget. It is made from a sturdy cast iron frame and can be bench or pedestal mounted with the included pedestal. The RDB-25 from Baileigh Industrial was designed to bend the most common sizes of tubing on safe centerline radii to ensure great looking bends. This

manual tubing bender comes standard with the following round tube die sets: • 3/8" OD x 2" CLR • 1/2" OD x 2.25" CLR • 9/16" OD x 2.5" CLR • 5/8" OD x 3" CLR • 3/4" OD x 3.5" CLR • 7/8" OD x 4.25" CLR • 3/4" Square x 3.75" CLR • 1" Square x 4.25" CLR

Also included is a very nice carrying case, which allows the bender to be stored when not in use. Contact a Baileigh Industrial representative for more information on the RDB-25 manual tube bender.

P/N 13-08972

BAILEIGH MANUAL TUBE BENDER RDB-050



The RDB-050 manual tube bender was designed as an affordable bender that has enough capacity for just about any chassis fabrication shop. Can bend up to 2-1/2" OD mild steel with a wall thickness of .120" and 2" OD Chromalloy with a wall thickness of .120". The most unique feature of the RDB-050 is that it has three selectable bending speeds. The proper speed for each

BAILEIGH MANUAL TUBE BENDER RDB-100



This bending machine can be fitted with hundreds of round and square tubing die sets as well as round pipe dies sets with a maximum center line radius up to 7". This manual tube bender uses a large diameter indexing plate that allows the fabricator to bend up to 206 degrees (180 degrees plus spring back) in one shot without having to re-index and re-pin common on most other manual pipe benders on the market. Each

BAILEIGH ENGLISH WHEEL EW-28



This quality English wheel is a heavily built floor stand unit that can handle smoothing compound curves into mild steel and aluminum sheet metal for restoration or bodywork on autos, planes, cycles and much more. This machine has an 18-gauge mild steel capacity and has an ample 28" throat depth. The EW-28 English wheel comes standard with an 8" X 2" upper roll and includes six lower anvil rolls with varying crowns. The radius included for the six lower rolls are 2", 3", 4", 6", 8", and 12". Like other Baileigh English wheels, the machine comes intact with only minor assembly required (no welding required). The frame members are constructed of heavy walled square tubing that is electro welded to a truss system offering little flex

at maximum capacity. **Specifications**: • Capacity (Mild Steel): 18 ga • Throat Depth: 28" • Shipping Dimensions(L/W/H): 36"/34"/15" • Shipping Weight: 191 lbs......P/N 13-09001

BAILEIGH ENGLISH WHEEL MANUALLY OPERATED EW-40



Baileigh's quality English Wheels have a generous 40" throat depth, and ship complete with five bottom anvils and one 7" upper wheel. It has a rugged electro welded frame and stand for ease of use and years of quality shaping and forming metal. The EW-40 English wheel has an 18 gauge mild steel capacity and a 13 gauge aluminum capacity. Like all Baileigh metal forming machines the EW-40 is a quality machine

for a reasonable price. This machine is in stock for quick deliveries.

Specifications: • Capacity (Mild Steel): 18 ga • Throat Depth: 40"
• Shipping Dimensions(L/W/H): 72"/36"/15" • Shipping Weight: 388 lbs
P/N 13-09003

BAILEIGH MANUAL MULTI-PURPOSE BENDER MCB-650



BAILEIGH MANUAL HOLE SAW NOTCHER TN-200H

This coping machine can be vertically mounted in a drill press, or for larger pieces it can be horizontally mounted on a weld bench and powered by a portable drill.

This hole saw tube notcher is made of thick 3/8 inch aluminum with a heavy bronze bushing that is replaceable if ever need be. The spindle is made of a ½" hardened shaft for longevity and less vibration. This coping machine can notch at angles up to 45 degrees in less than 30 seconds and has a capacity of up to 2" round tube.



BAILEIGH MANUAL HOLE SAW NOTCHER TN-250

This is the most revolutionary hole saw pipe notcher on the market and is perfect for chassis, roll cages, and much more. This is the only hole saw tubing notcher that is always centered left to right and up and down. This coping machine is constructed of heavy steel plate to reduce vibration, uses a 1-1/4" Thompson® shaft that rides in a sealed needle bearing for longevity of the machine and hole saw. The TN-250 tube notchers vise has a powerful screw with a built in hand wheel



BAILEIGH MANUAL HOLE SAW NOTCHER TN-300

This tubing notcher can notch from 1/2" to 3" tube and 1/2" to 2-1/2" Schedule 40 Pipe in materials such as aluminum, mild steel, chromoly, and stainless steel. The tube notchers vise has a quick release so

different notch angles can be set up in a second or two and locked in with a solid taper lock. Can notch up to 60 degrees as standard, but with extended hole saws and the right size OD, notches up to 75 degrees can be attained. The vise is a self centering that is on an acme screw for quick tightening and releasing of the material. An offset adjustment is standard for those jobs where more strength is needed like on some hand railing or chassis frame applications. The drive carriage on the TN300 pipe notcher houses an industrial grade motor tied to a direct drive gear reducer that turns the hole saw with ease, even at full capacity. This tube notchers carriage rides on a solid V-block roller assembly that is coupled to a large drive wheel for pushing the hole saw into the material with limited vibration and ease. This simple unique design on this tube notcher makes notching tube and pipe a breeze.

P/N 13-08983

BAILEIGH MSS-16 MANUAL 16GA SHRINKER STRETCHER

Baileigh's MSS-16 sheet metal shrinker stretcher has a heavy cast iron frame with a deep 8" throat. It comes standard with two sets of jaws, one for shrinking and one for stretching. This is a manually operated machine that has a heavy engagement lever that allows perfect control of the function at hand. This sheet metal shrinker stretcher has a mild steel capacity of 16 gauge and an aluminum capacity of 14 gauge. No other sheet metal stretcher shrinker on the market has such a generous throat depth with a heavy maximum capacity for such a good price.

Specifications: • Capacity Mild Steel: 16 ga • Capacity Aluminum: 14 ga • Throat Depth: 8"
P/N 13-08985



BAILEIGH MSS-16F SHRINKER STRETCHER

This model is a heavy duty foot operated shrinker stretcher for shrinking or stretching mild steel sheet metal down to 16-gauge (14-gauge aluminum) in thickness. This is the perfect machine for working metal for auto, cycle or airplane body work. This machine is ruggedly built and can shrink or stretch metal with ease at full capacity.

Our MSS-16F metal shrinker stretcher has a rugged floor stand with foot pedal control to actuate the jaws allowing the hands to be

free to properly work the material. An ample 6" throat depth allows for hundreds of applications to be worked on compared to smaller throat depth models. The rugged base has wheels allowing for mobility in any cramped shop environment.

This metal stretcher shrinker has quick jaw change over features built in so changing from shrinking metal to stretching metal takes only a couple seconds. This machine comes standard with jaws to stretch metal and shrink metal (note: optional aluminum jaws are available).

Specifications: • Capacity Mild Steel: 16 ga • Throat Depth: 6" • Weight: 78 lbs.......P/N 13-08986



BAILEIGH ONE PHASE POWER HAMMER

MH-19 power hammer is the most revolutionary metal forming machine on the market. In summary you can achieve stretching, shrinking, planishing, and doming with critical adjustments on the fly while in operation. This is the ultimate metal shaping and forming power hammer on the market. No other machine is as versatile as the MH-19. The MH-19 includes the following tooling to get you up and running quickly at no extra charge: (1) set of thumbnail shrink dies, (1) flat top die, and

(1) Lower planishing die.



BAILEIGH MSS-18 MANUAL 18GA SHRINKER STRETCHER

Baileigh's MSS-18 sheet metal shrinker stretcher has one complete shrinker and one complete stretcher both in their own cast iron housings. The heavy casting assures a quality function at full capacity, which is 18-gauge in mild steel and 16-gauge in aluminum. Both units are foot operated and come with a heavy steel stand as standard.

DE-ICE EQUIPMENT - DIGITAL THERMOMETERS

DE-ICING CARTS



Aircraft De-icing Gasoline Engine Powered Carts are designed for outdoor de-icing operations. These carts use either a 5.0 or a 5.5 hp air-cooled gasoline engine, providing adjustable fluid flow rates and pressures of up to 6.0 gpm/150 psi and 10.0 gpm/300 psi respectively -- sufficient to deice all general aviation, corporate

& charter aircraft. The standard carts range in capacity from 25 to 110 gallons. Each is equipped with an electric immersion heater to heat the de-icing fluid to a maximum of 160°F to help melt frost, snow & ice from your aircraft's surfaces. ALI carts include Honda 5.5 engine, 24" tow bar with pintel ring, high-pressure hose, adjustable pressure valve, pressure gauge, pistol grip handgun, and adjustable brass nozzle. Electric models come with 12v Self Containment kit.

Gas powered engines							
Description	Part No.	Price					
40 Gallon 5.5 Hp gas Engine with 2500 watt heater.	12-02083						
60 Gallon 5.5 HP gas engine with 2500 watt heater.	12-02084						
Electric powered engi	Electric powered engine						
Description	Part No.	Price					
25 Gallon 12 volt Electric Cart.	12-02085						
40 Gallon 12 volt Electric Cart.	12-02086						
60 Gallon 12 volt Electric Cart.	12-05533						

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

NYLON FLANGES IN BATTERY BOX MODIFICATION KIT



Features: • Less expensive to modify the existing box than to replace it • Mod and Positive and Negative Cables are less costly than new braided straps • Compatible with our famous "Low Loss" Cable Kits • Nylon inserts guard against battery grounding or unwanted mishaps • Add positive and negative copper cables for additional charge

Benefits: • 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 Kits! • Eliminate extra connection on outside of the battery box • Do away with the troublesome braided negative strap.

HEAVY-DUTY IR DUAL-LASER THERMOMETER



Features of the IR Long Range Professional Thermometer include a bright, built-in dual laser which provides easy aiming and defines target area, amber back-light LCD display, programmable HI and LOW audible temperature alarms, and high intensity white LED flashlight. Features: • Accuracy +/- 2% of reading on full scale with 1/10th degree resolution • Adjustable Emissivity from 0.10 to 1.00 in 0.01 steps • Measures MAX, MIN, DIF and AVG temperatures • Amber back-light LCD display, select C or F, Auto Off in 60 seconds • LCD Display error messages: Thermal Shock, Low Battery, and more • Hard ABS padded plastic carry case included • Heavy duty magnet in base of handle Specifications: • Uses 2 x AAA

Heated Insulate for indoor use o a heated insulate storage tanks u heated fluid fro Aircraft Deicing

AIRCRAFT DEICING STORAGE TANK

Heated Insulated Storage Tanks are appropriate for indoor use only to store your de-icing fluid with a heated insulated wrap preset to 140°F. These storage tanks use an electric pump to transfer the heated fluid from the storage tank right to your Aircraft Deicing cart at a rate of up to 12 GPM. All storage tanks are supplied complete including a heavy duty polyethylene tank, 3000w 240v immersion heater, heavy vinyl insulated wrap, transfer pump, temperature gauge and a highpressure hose with a pistol-grip nozzle.

Tank:

- · Capacity: 100 Gallons
- Dimensions: 28in Diameter x 46in Height
- · Material: Polyethylene

P/N 12-05532

ATS HOSE FITTING ASSEMBLY TOOLS



Individual sizes: #3, #4, #5, #6, #8, #10, & #12. For use in assembling stratoflex series 300, aeroquip 303, 491 hose fittings. Chrome Plated.

Size	Part Number	
#3	12-05273	
#4	12-05274	
#5	12-05275	
#6	05-26371	
#8	12-05498	
#10	12-05271	
#12	12-05272	

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

NO-SPARK ABS BATTERY TOOL



3D printed abs plastic with 3/8" drive for a socket wrench.

Dimensions - 3"x1"

Plastic is non-conducive so you can safely take off and on your battery terminals without a shower of sparks.

VALVE WOBBLE TEST

FIXTURES
The Valve Wobble Test Fixture for parallel valve Lycoming engines is used to comply with LycomingSB-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 a angle valve engine.

Fixture w/o 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.

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

VALVE LASH ADJUSTING TOOL



This tool greatly reduces the time required to adjust valves and improves the accuracy of the adjusting operation. Used on Lycoming O 235 and O 290 series engines. Quality constructed of alloy and toolsteel.

P/N 12-21550

PROPELLER SHAFT OIL SEAL INSTALLER

Installs one piece stretch seals without damaging surface on seal or crankshaft. For all flange shafts per Continental Bulletin M-70-2. Also fits Lycoming. For installing one piece stretch seals without damaging surface on seal or crankshaft. 1 lbs (0.5Kg) shipping weight. P/N 12-04566

VALVE SPRING COMPRESSION TOOL



Genuine Briggs & Stratton tool used on the L-Head series engines to remove and re-install the valve spring retainer.

P/N 08-17411



ROCKER ARM SHAFT REMOVAL TOOL

These simply bolt to the head and the knurled knob screws down to compress the valve spring allowing the shaft to be slid out with no spring pressure. P/N 12-03227



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

BUNG NUT DRUM WRENCH



Non-Sparking Aluminum Bung Nut Wrench: Use to install or remove large and small drum plugs and install faucets. Accommodates most common bungs also, tightens or loosens drum rings. P/N 08-07615

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

ATS MAG LOCK TOOL

Holds Timing Gears When Removed. Works with all bendix magnetos. 1 lb (0.5Kg) shipping weight.

P/N 12-05509



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

ALTERNATOR DRIVE COUPLING TOOL KIT



Alternator Drive Coupling Tool Kit: Designed for proper installation, removal and testing of alternator drive couplings found on many Continental Aerospace Technologies piston engines.

Alternator Coupling Tools are purpose-built to make it easy for mechanics to inspect this critical component and simplify coupling installation and removal. The tool kit consists of a zinc-coated coupling spanner wrench and unique coupling gear socket with steel housing and aluminum gear engagement, designed to protect the steel coupling gear from damage during maintenance. Together, these tools allow the coupling to be held in place (mounted on the alternator or free-standing) while the coupling gear slippage is checked with a calibrated 3/8" torque wrench

O-200/300. IO-240/360 series engines, in addition to Continental O-520/550 seriesP/N 08-17440



ENGINE OVERHAUL STAND

This bolt together Engine Overhaul Stand, ideal for actual overhaul of engines. Constructed of heavy duty steel, it features three legs which allow it to sit level on uneven floors. Predrilled adapter for Continental & Lycoming engines. Sturdy tripod design. Assembles in minutes with a 1/2" wrench.

Assembled dimensions: 24" (61cm) high, 36" (91cm) distance between legs. Includes a set of locking casters for easy mobility. Supports up to 1200 lbs (545 Kg) (static tested to 2500 lbs (1136 Kg). Includes Adapter for Continental and Lycoming engines. MADE IN USA. Overhaul StandP/N 12-21555

Wheel Set for StandP/N 12-00919

CONTINENTAL ENGINE MAG TIMING TOOL



Aluminum CNC tool manufactured in Alaska for simple and perfect magneto timing. Simply position engine on #1 TDC compression stroke. Lube grommets. Put this tool on the top two propeller nuts and sight down top case halves to see exact

mag timing. Now there's no need for propeller protractor cones! TCM: 470 / 520 / 550......P/N 12-02817 C-85F / C-90 / O-200......P/N 12-05514 O-300: A / B / CP/N 12-05515



AEROTAR LYCOMING ST-289 INTAKE PIPE SWAGING TOOL Aerotar Lycoming ST-289 Intake Pipe Swaging

Tool......P/N 12-05310



This cast aluminum alloy valve spring compressor fits Lycoming parallel valve and angle valve horizontally opposed engines. An excellent tool at an economical priceP/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

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EAR ISLAND REMOVAL TOOL



MAGNETIC SHEET METAL CLAMPS

Great general purpose discs. They are excellent for arts and crafts applications that require a strong, thin disc. Just 1/16" thick, but still a sturdy disc. They are an excellent choice for magnetic therapy. The D81 is deceptively strong for it's size.

P/N 12-05104



HANDY BEARING PACKER

Quickly Flushes Out Old Grease and Repacks Bearings with Less Mess. The Handy Packer works on bearings up to 3 1/2" O.D. The grease stays in the tool cavity, not on your hands. To pack a bear-

ing, place the bearing on the piston. Press down on the cap until the old grease is forced out and the new grease shows on top of the bearing.

P/N 12-02578



MAGNETIC FINGER TOOL

This snug and stretchy glove slips on your finger and turns it into a professional tool. The powerful magnet at your fingertip allows you to hold and retrieve any small metal object with precise control. Use it to easily start a variety of fasteners in tight-fitting or difficult

HEAVY-DUTY BI-METAL HOLE SAWS



Milwaukee hole saws provide an economic al 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.	Price
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	49-56-7055	-
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	n	

HEAVY-DUTY SHOE SAW ARBORS



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

NUT PLATE DRILL JIGS

Nut Plate Drill Jigs are designed to facilitate accurate rivet hole drilling for standard plate nuts. Nut Plate Drill Jigs are known as Anchor Nuts Or Nut Plates. Hand-held Nut Plate Drill Jigs are manufactured to precise tolerances and include drill bushings to reduce wear and assure consistent holespacing. Every Nut Plate Drill Jig features an ergonomically designed handle with a flexible stainless spring blade, allowing for clearance while the jig is in use.

SINGLE LUG PLATE NUT DRILL JIGS

Nut Thread Reference	(C) Hole Spacing	(P) Pilot Diameter	(K) Drill Size	Part No.	Price
6-32	.344	.1390	#40	12-04781	
8-32	.344	.1640	#40	12-04783	
10-32	.344	.1910	#40	12-04784	
1/4-28	.344	.2480	#40	12-04785	

SINGLE MINI LUG PLATE NUT DRILL JIGS

Nut Thread Reference	(C) Hole Spacing	(P) Pilot Diameter	(K) Drill Size	Part No.	Price
6-32	0.218	0.1660	#40	12-04786	
8-32	0.234	0.1930	#40	12-04787	
10-32	0.250	0.2180	#40	12-04788	
1/4-28	0.281	0.2810	#40	12-04789	

TWO-LUG PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing	(P) Pilot Dia	(J) Hole Spacing		Part No.	Price
6-28	0.344	0.688	0.1390	#40	12-04790	
8-32	0.344	0.688	0.1640	#40	12-04791	
10-32	0.344	0.688	0.1910	#40	12-04792	
1/4-28	0.344	1.000	0.2480	#40	12-04793	

TWO-LUG MINI PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing		(J) Hole Spacing		Part No.	Price
6-32	0.2180	0.4360	0.1390	#40	12-04794	
8-32	0.2340	0.4680	0.1640	#40	12-04795	
10-32	0.2500	0.5000	0.1910	#40	12-04796	

CORNER LUG PLATE NUT DRILL JIGS

Nut Thread Ref	(C) Hole Spacing		(J) Hole Spacing		Part No.	Price
8-32	0.344	0.486	0.1640	#40	12-04797	
10-32	0.344	0.486	0.1910	#40	12-04798	
1/4-28	0.500	0.707	0.2480	#40	12-04799	

MECHANICS EYEBALL DRILL JIG



The eyeball drill jig was designed to help eliminate time consuming manual layout of the holes for the firewall eyeball. It's a great accessory! The drill sequence is started with the center hole for the eyeball, drilling a #30



SCREWGRAB ANTI-SLIP GEL FOR STRIPPED SCREWS

TO

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.





S4-3 RACE REMOVAL TOOLThe 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/S6		P/N	12-17700/pr.
Bendix D2200, D3000,	D3200	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	

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

GAP PLUG GAUGE .014 TO .018

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

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

ENGINE TOOL TRAY



The engine tool tray is designed for aviation enthusiasts who do maintenance on their own aircraft, as well as full time mechanics. This tool tray sits on top of the push rod tubes and is protected by rubber trim on the bottom to eliminate any damage to the aircraft engine. Instead of dropping a screwdriver or

a nut down between cylinder baffling, this tool tray will give the mechanic great organization. It allows for spark plug placement, tool placement, as well as all of those pesky nuts and bolts.....P/N 12-04592

PISTON RING COMPRESSOR KIT



The ATS Piston Ring Compressor features a quickchange design to speed up piston ring installation. It includes the famous Hastings Ring-O-Matic® pliers and bands that operate in all positions: not just vertically or horizontally. The pliers incorporate a precision locking action for exact holding and quick release. Complete kit includes the Ring-O-Matic® pliers and one of each of the following size bands: 3-7/8" to 4-1/8", 4-1/2" to 4-3/4", 4-3/4" to 5", 5" to 5-1/4", & 5-1/4" to 5-3/4"

Description	Part No.	Price
Kit	12-03154	
Compressor Pliers	12-03155	
Piston Ring Compressor Band 3-7/8"TO 4-1/8"	12-03156	
Piston Ring Compressor Band 4-1/8"TO 4-1/2"	12-03157	
Piston Ring Compressor Band 4-1/2"TO 4-3/4"	12-03158	
Piston Ring Compressor Band 4-3/4"TO 5"	12-03159	
Piston Ring Compressor Band 5"TO 5-1/4"	12-03160	
Piston Ring Compressor Band 5-1/4"TO 5-3/4"	12-03161	



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).

	Part No.	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				

JEI	
Piston Ring Pliers #1114	P/N 1114 Individual Band #
1125 for 4-3/8	P/N 1125

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	
		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



For lycoming engines

For socket type nuts (internal wrenching)

Standard 1/2" square female drive end

Made from alloy steel forgings, heat-treated for maximum toughness.

1/2" Allen Head Hex	P/N 64942
3/8" Allen Head Hex	P/N 64943
Set of both	P/N 12-04722

ATS LYCOMING AND CONTINENTAL CYLINDER BASE NUT WRENCHES

The ATS 3882-series Cylinder Base Nut Wrenches are made from forged alloy steel, tempered, and hardened for maximum strength.

Description	Part No.	Price	Description	Part No.	Price
ATS 3882 9/16	12-04977		ATS 3882 5/8	12-04976	
ATS 3882 1/2	12-04975		ATS 3882 3/4	12-04978	



DIPSTICK REMOVAL TOOL

This Removal Tool is perfect for freeing up those seemingly seized plugs. The Innovative design only allows a counter-clockwise rotation, meaning this devise won't further lock the dipstick in place. Features: • Molded from very durable and light weight plastic • Unique design prevents this tool from being used to tighten (nice feature for flight school use)P/N 12-05420

PECIALTY TOOL

ULLMAN MAGNETIC PICK-UP TOOLS



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



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



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

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 continentals, Lycoming Parallel Valve, Lycoming Angle Valve, others on request.

P/N 12-17605 Lycoming Parallel Valve Bracket.....P/N 12-17610 Lycoming Angle Valve BracketP/N 12-17611 Cutter Head InsertsP/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



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.

Recessor Mini......P/N 12-02271



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



SUPER HANDY MAGNETIC RETRIEVAL TOOL ST-225

The Super Handy Magnetic Retrieval Tool extends 26" and picks up five pounds.

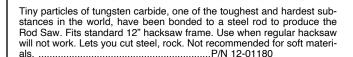
P/N 12-02932

2-IN-1 MAGNETIC TIP PICKUP TOOL



This pickup tool helps you retrieve ferrous metal objects from tight spaces your arm won't fit into. It's easy to use - just squeeze the handle to open and close the jaws. The 24 in. arm, 4-claw grabber and powerful magnetic tip on the pickup tool will quickly have your wayward part back in your hand where it belongs.......P/N 12-03707

AMAZING ROD SAW



HANDEE CLAMP

This innovative tool solves the problem of that out of reach grasp. Have you ever been working on a job where reach grasp. Have you ever been working on a job where you needed to put a clamp, nut, or bolt on something that was just out of reach of your fingers or another bulky tool?

The Handee Clamp makes that job easy. Simply put that nut, clamp, or bolt on one end and then tighten the nut on the other end to secure. Designed to firmly hold nuts, bolts, and clamps in its easily adjustable jaws, the Handee Clamp acts as a small, versatile vise early explained to the focus on the job at hand. You won't have to work. grip enabling you to focus on the job at hand. You won't have to worry about dropping that nut or bolt into that pesky floor drain ever again, or fight with that hose clamp as you work on that transmission line. From a professional auto or aviation mechanic, to a do-it-yourselfer that always has a project on deck in your garage at home, you need this tool in your inventory.....P/N 13-20594



HIGH CAPACITY EXHAUST DESICCATOR

2.5 times the desiccant capacity of previous design, One piece construction allows the dessicant 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	
12-30240	36"	25	500 cubic feet	



EVA-DRY® HIGH CAPACITY DRY DEHUMIDIFIER

Designed to absorb moisture from small enclosed

Designed to absorb moisture from small enciosed areas. It will help protect clothes and valuables from the damaging effects of mold/mildew and moisture rot. It is 100% renewable and needs no power to operate. Place the Eva-Dry unit in a closet or any small, enclosed space, and it will start to absorb moisture immediately. There is an indicator window with special "Color Changing Crystals" that change from orange (when dry) to green with the indicate when the unit people to be "renewed." The unit (when wet) to indicate when the unit needs to be "renewed". The unit will absorb approx. 6-8 ounces of moisture (depending on humidity levels this should take approx. 4-8 weeks). Once the moisture has been absorbed it cannot leak or spill. This unit uses a specially engineered, crystallized silica gel that is odorless, non-toxic, Eco-Friendly and com-

WING STAND

stand holds 2 wings.

P/N 12-21390/ea

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"I x 44"h x 36"w. Assembly req. Each

TENNSMITH HAND BRAKE AND 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

Model HBU48-12 Hand Brake......P/N 12-20710 Optional Stand......P/N 12-20705

NNSMITH 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

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-pro-

file 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 CleanerP/N 12-00955 80 Grit Seat Track CleanerP/N 12-00952



AN BOLT LENGTH GAUGE SET

Effortless Bolt Sizing: Our AN Bolt Length Gauge simplifies the process of identifying AN bolt lengths, making it a breeze for both professionals and hobbyists. Say goodbye to tedious measuring with calipers or rulers.
Wide Range of Bolt Sizes: This versatile tool covers a broad spectrum of bolt sizes, from 3 to 50, ensuring you have the perfect solution for any project. No more second-guessing or wasting time searching for the right bolt length. Precision and Accuracy: Engineered for accuracy, our gauge guarantees precise measurements

every time. You can trust the results it provides, reducing errors and improving the quality of your work......P/N 12-06312

SLIDE HAMMER



Blue vinyl hand grip over steel handle reduces sting on technicians hands and provides 100% grip. 3 lb. slide weight is mounted on 1/2" plated steel shaft. Broached hex in nose cone locks pulling screw in place...ends breakage. Supplied with two hardened pulling screws and "I." puller book above the screws and the first steel blook and a screw and the first steel blook and the screw "L" puller hook fabricated of aircraft quality steel. Nose cone and shaft threads are 1/2" - 20.......P/N 15-08252

MACHINIST HOOK SCRIBE

Machinist Hook Scribe New. 2-point scriber has hardened, ground steel points. Features a straight point and a 90 degree point. Length: 9".

PIG TAIL HOOK SCRIBE

Both the 45 degree and pig tail points of the scribe are made of hardened, ground steel. Both ends of the tool unscrew from the body.

P/N 12-02897



WOOD HANDLE TOOTHBRUSH STYLE **CLEANING BRUSH**

Three rows of bristles by seven, your choice of materials, with bent wood handle approx 7 3/4 inches long. An especially polular welders tool, but very suitable for a variety of cleaning applications. Use stainless steel for maximum abrasive action, brass for less scratching. SW version stainless bristles are wire laced for positive retention.

P/N 04-02647



CLEANING TUBE BRUSH 3/16 X 6.25 INCHES

Tube brushes (also known as cylinder brushes) are filled with Dupont Tynex nylon and have excellent wear resistance. Although more susceptible to strong solvents than bristle filled brushes, nylon is stiffer, wears longer and cleans easier. This cylinder brush is perfect for manually cleaning internal surfaces such as tubes or threaded holes. Handle is made of P/N 09-04587



SWISS PATTERN NEEDLE

FILE SET
Swiss Pattern Needle File Sets have been designed to meet the needs of hobbyists, craftsmen, tool makers and jewelers. Every file is made from alloy steel and machined into distinctive shapes for various small scale and finishing applications. Also included is a 700 series Versa-Grip handle with a locking screw chuck.

P/N 12-03351



STRIPMASTER WIRE **STRIPPER**

Stripmaster wire Sstripper #16 to #26 AWG. Knife-type blades Cleanly strips wire up to 7/8 in. (22mm). One-third less hand pressure for each strip. Eliminates nicking, cutting, and fraying of wire. Wire gripper holds wire centered in hole. P/N 12-03714



IDEAL COAX STRIPPER
3-step coaxial stripper. Adjustable coaxial wire stripper. For popular dual crimp BNC and TNC connectors. Strips braid 0.240 inch (6mm) and dielectric 0.240 inch (6mm). Replacement cassettes available.

P/N 12-03716



SCREW PAINT CUTTERS

For AN4 Screws. You know how frustrating it can be to remove a painted over screw only to wind up chipping up the paint job. But you wouldn't have that problem if you had a set

of these innovative paint cutters. They work by slicing through the paint around the head of the screw so you can remove it without chipping the paint. They have a 1/4x28 thread to fit into any angle drill or you can get the optional arbor (p/n 12-02460) for use in a drill chuck. Does not work on dome head rivets. 1 lbs (0.5Kg) shipping weight.

Size	Part No.	Price	Size	Part No.	Price
AN4	12-02452		AN6	12-02453	
AN8	12-02454		AN10	12-02456	
1/4"	12-02459		6 pc. Set	12-02461	



PAINT CUTTER ARBOR

ArborP/N 12-02460



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



NSL DISPENSER RETRACTABLE RETAINER

The B&O model HP-SK/100 and HP-SKA/100 is a sealant gun manufactured for the use of Semco and Techcon cartridges. Designed with a lightweight, retractable holder system, the HP-SK/100 and HP-SKA/100 does away with the standard steel tubed cartridge holders and can be used with or without the retainer.

This unique system only requires one cartridge holder to hold 2.5 oz. 5 oz. 6 oz, 8 oz and 12 oz cartridges. It is engineered for smooth dispensing, and the holder is designed to provide a full view of the cartridge, allowing the user to see the level of fluid inside the dispenser at all times. Manual Dispenser w/Retractable Retainer.....P/N 09-06036 Battery Gun w/Retractable Retainer.....P/N 09-06037



NSL SEALANT MIXER HEAD

Chuck the 1/4" shank of this tool into your drill and easily mix SEMKIT Sealant Tubes, the flat end has the 2 connectors that fit into the sealant cartridge spinner, with the long narrow hexagonal piece having capabilities to be attached to a drill .P/N 09-06059

ERCOUPE 3 STONE ROTARY CYLINDER HONE KIT



This 3 Stone Rotary Cylinder Kit makes available an effective tool to recondition the interior running surface of the oleo cylinder barrel, and is intended to be used each time the MLG oleo struts are disassembled for routine seal replacement or when upgrading to the popular Main Landing Gear Oleo Restoration Kit (STC SA01247CH).

The clean and resurfaced interior cylinder bore results in increased seal effectiveness and service life and can be accomplished with or without

removing the Taxi Stack end fitting and Donuts.

This kit is applicable to Ercoupe 415-C, CD, D, E, G, F-1, F-1A, Alon A2, A2-A and early M10 aircraft that are equipped with either the Hayes welded or Erco forged trailing link MLG assemblies that incorporate liquid



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 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
12-00102	3/4"	
12-00103	7/8"	
12-00104	1"	
12-00105	1-1/8"	
12-00106	1-1/4"	
12-00107	1-5/16"	\$49.80
12-00108	1-3/8"	

Part No.	Tubing O.D.	Price
12-00109	1-1/2"	
12-00111	1-5/8"	
12-00112	1-3/4"	
12-00113	1-7/8"	
12-00114	2"	
12-00116	2-3/8"	

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, demagnitizes instruments & electronics components. Size:

3M™ ELITE PNEUMATIC ORBITAL SANDER

Features an alloy steel curved-throttle lever with built-in wrist support. 3M gripping material molded into the interchangeable comfort grip conveniently located speed control dial and internal muffler. Precision Balanced for Smooth Operation Meet or exceed highest performance standards Optimize to work with 3M abrasives. Multiple grips sizes available for improved operator comfort.

P/N 05-11839

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.

P/N 12-01333

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.
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)	Part No.	Price
20319	5"(127)	Yes	3/16"	12,000	.28(209)	17(481)	05-03483	
20317	5"(127)	No	3/16"	12,000	.28(209)	17(481)	05-03484	

ACCESSORIES



Clean Sanding Filter Bag Thorough dust collection enhances the performance of $3M^{\,\text{TM}}$ Clean Sanding Discs (sold separately) Achieves superior dust collection when used with 3M™ Random Orbital Sanders with Self-Generated VacuumP/N 05-03486

STORAGE STATION



For storage of up to 15 wire belts or 9 rubber erasers and one MBX Power Tool (machine, belts, erasers not included).

P/N 12-01399

MBX PNUEMATIC STARTER SET



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.

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, 31mq.....P/N 12-01394



Medium (11 or 23 mm) For the removal of seam sealant & corrosion on



Fine (11 or 23 mm) the removal of paint on aluminum bodies.

MBX BRUSH BELTS

MBX 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 MBX Belts offer top safety and durability due to the high flexibility safety and durability due to the high heatbility of the MBX Belts. No clogging - no heat built-up - no grinding. The high masses due to centrifugal force during rotation are absorbed safety by MBX Adapter Systems MBX Medium have angled tips to create a sandblast effect. 11mm is for expecially hard-to-reach-areas such as a 90° angles.

BS-M11X Med. Blue 11mm Brush P/N 12-01402 BS-M23X Med. Blue 23mm Brush P/N 12-01403 BS-F11 Fine Blue 11mm Brush P/N 12-01404 BS-F23 Fine Blue 23mm Brush P/N 12-01405



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 OEMpainted surfaces made of metal, aluminium, glass, fibreglass (gel coats) - and most amazing: NO PAINT DAMAGE. The centrifugal force created by rotation makes the MBX Vinyl Zapper 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 MBX Vinyl Zapper is strongly enlarged by the application of pressure to the work surface. This improves performance (compare to a car tire containing only a part of p taining only a small amount of air). Long service life Wide construction. Vinyl Zapper 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

MBX Vinyl Zapper Kit 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.

	Part No.	
MBX Pneumatic Vinyl Zapper Kit USSP-01-05 MBX Pneumatic Tool, 1-23mm Adaptor, 3 Vinyl Erasers	12-02038	

CLECOS - HOLE SAWS

CLECO SHEET HOLDERS K-SERIES SPRING CLECOS

SI SI Sh hc Th M

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". Length is 2.26"

Use with sheet holder pliers. 10% discount on 50 pcs., 15% discount on 100 pcs.

O			
Description	Size	Part No.	Price
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. Length is 1.63" Made in USA

		0 1 0		
Material	Size	Drill Size	Part No.	Price
Copper	1/4"	1/4	12-02424	
Zinc	3/32"	#40	12-02077	
Copper	1/8"	#30	12-02078	
Black	5/32"	#21	12-02079	
Brass	3/16"	#10	12-02080	

KHD-SERIES LONG REACH SPRING CLECOS - Designed for clamping thicker material. 0-1/2" grip range. Length is 2.40". Made in USA

Material	Size	Part No.	Price
Zinc	3/32"	12-02077	
Copper	1/8"	12-02078	
Black	5/32"	12-02079	
Brass	3/16"	12-02080	

CL SERIES - The "CL" series fasteners are the standard plunger type Cleco with an extended grip range of 1/4" - 1/2". Length is 2.475" Spring type Fastner

Material	Size	Part No.	Price
Zinc	#40	12-02425	
Copper	#30	12-02426	
Black	#21	12-02427	
Brass	#10	12-02428	

CLECO KEEPER

Fabricated of durable polypropolene, the Cleco Keeper is prepunched 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 Keeper measures 8"L x 3"W. Helps eliminate misplaced fasteners and makes inventory of available fasteners quick and accurate. Available in 3 models to hold 3/32", 1/8", 5/32", or 3/16" 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 PROTECTOR



Prevent Damage with Precision: The Cleco Protector is a small yet indispensable tool that fits snugly onto your cleco, ensuring it won't cause any harm to your precious work. Say goodbye to dings and gouges forever!

No More Unsightly Imperfections: Those frustrating small dings around builder rivets will become a thing of the past when you use our Cleco Protector. Don't let bent clecos mar your masterpiece.

P/N 12-06309

CLECALL UPRIGHT CLECO PLIERS



CLECO GRIP POWER DRIVEN SHEET HOLDERS



Power-Hex Nut Style - Standard Grip 0-1/2". Hex Nut Fasteners are recommended for high production applications that require a consistent clamping force. They are pneumatic driven with the US7381HX Power Nut Runner.

Description	Size	Part No.	Price
0-1/2" Grip Power Driven Hex Nut Fastner, Copper	#30	12-02430	
0-1/2" Grip Power Driven Hex Nut Fastner, Black	#21	12-02431	
0-1/2" Grip Power Driven Hex Nut Fastner, Brass	#10	12-02432	

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Power-Hex Nut Style -Long Grip 0-1"

Description	Size	Part No.	Price
1" Grip Power Driven Hex Nut Fastner, Zinc	#40	12-02433	
1" Grip Power Driven Hex Nut Fastner, Copper	#30	12-02434	
1" Grip Power Driven Hex Nut Fastner, Black	#21	12-02435	
1" Grip Power Driven Hex Nut Fastner, Brass	#10	12-02436	



Manual Wing Nut Style - Standard Grip 0-1/2". Wing Nut Fasteners are recommended for low production applications where high clamping force is required. The clamping force ranges from zero to 300 lbs

Description	Size	Part No.	Price
0-1/2" Grip Manual Wing Nut Fastner, Zinc	#40	12-02437	-
0-1/2" Grip Manual Wing Nut Fastner, Copper	#30	12-02438	
0-1/2" Grip Manual Wing Nut Fastner, Black	#21	12-02439	
0-1/2" Grip Manual Wing Nut Fastner, Brass	#10	12-02440	



Manual Wing Nut Style - Long Grip 0-1"

Description	Size	Part No.	Price
1" Grip Manual Wing Nut Fastner, Zinc	#40	12-02441	
1" Grip Manual Wing Nut Fastner, Copper	#30	12-02442	
1" Grip Manual Wing Nut Fastner, Black	#21	12-02443	
1" Grip Manual Wing Nut Fastner, Brass	#10	12-02444	



CAMLOC PLIERS

PNEUMATIC CLECO INSTALLATION TOOL



Features: • Lever throttle • 360° swivel mount • For use on button type and side grip temporary fasteners • Quiet operation• Straight handle • 5'8" polyurethane lead hose with 1/8" Male NPT • 5-3/8"



SPRING LOADED CLECO PLIERS



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

5 INCH SERRATED EDGE SCISSORS



5" stainless steel scissors are ideal for consumer and industrial applications. High quality stainless steel blades meet perfectly for precision cutting. The material being cut is held in place by one blade which is slightly serrated providing maximum

control. Scissors so sharp, they can cut through electrical wiring, plastic, aircraft composites, Kevlar® and more P/N 12-02975



UTILITY SCISSORS

These 5.5" stainless steel utility scissors can cut through heavy materials, while the black plastic handle and ergonomic design make using the tool

comfortable. These scissors are not only useful in the medical field, but in the industrial world as well, and its strong safety tip can offer peace of mind to medics and industrial workers alike P/N 13-03015



With a proprietary finger-friendly ceramic grind, these scissors cut materials effectively, but they resist cutting skin. Used in industrial, institutional, and educational settings alike, these lightweight scissors are ambidextrous and durable Soft-touch finger grips line their tough glass-filled nylon handles for the ideal mix of strength and comfort. They are also non-sparking and chemically inertP/N 12-04970



NO NICK TOOL CABLE TIE REMOVAL TOOL

No nick tool cable tie removal tool

P/N 12-03169



Olfa Heavy-duty plastic/laminate cutter, designed to produce a fine score line to precisely break plastics, acrylic and laminates. Features built-in room for spare blades, and blade retractable function. Comes with 2

spare blades in handle with shipmentP/N 12-02973

RATCHET-LOCK UTILITY KNIFE



This heavy-duty knife features an all-over rubber grip for professional comfort and control. An acetone resistant, elastomer handle with a poly-acetate blade-

lock makes it an official acetone resistant cutter. It features a ratchet-wheel blade lock and a heavy-gauge stainless steel blade channel that holds blade tight. A new sharp edge with each snap............ P/N 12-03654

FIBERGLASS RUBBER GRIP UTILITY KNIFE



This heavy-duty auto-lock utility knife is a powerful anti-slip utility knife, featuring a professional grade Fiberglass rubber grip and automatic blade lock for

maximum comfort and control. Heavy-gauge stainless steel blade channel protects and holds blade tight. Acetone resistant handle for easy cleaning. Built in versatile metal pick for opening paint cans, removing switch plates and more. Easy, tool-free blade change. Includes the double-honed UltraSharp Black snap-blade.....P/N 12-03655

OLFA SNAP BLADE KNIFE

Features a convenient detachable built-in blade snapper/disposal container in a heavy-duty ABS

plastic handle. Storage container can hold up to 26 9mm AB blade segments for thousands of cuts before emptying is needed. Easy, tool-

CERAMIC CRAFT KNIFE
The Slice craft knife is ideal for precision cutting, scraping, and handling. Its ceramic safety blade is nonsparking, chemically inert, safe to 1600 degrees Celsius, never rusts, and requires no oil coating. With a textured grip for superior control, this precision knife allows the user to make accurate, delicate cuts. Its ambidextrous no-roll design is weighted for balance and stability. Includes one rounded-tip ceramic safety blade with patented finger-friendly edgeP/N 12-04971

SLICE PRECISION CUTTER

The Slice® Precision Cutter is the perfect tool for crafters who want to cut various materials without worrying about harming themselves or their projectP/N 12-05634

SELF HEALING ROTARY CUTTING MATS

Self-healing, double-sided large mat protects and covers work. Green, self-healing professional quality rotary mat. Double-sided with yellow grid lines on one side for precision cutting, solid on opposite for general cutting. 1.5mm thick for a variety of applications. Store flat.

24" x 36"	P/N 12-02403
23" x 70" - with clip set (RM-clips/2)	P/N 12-02404
35" x 70" - with clip set (BM-clips/3)	



ROTARY CUTTER

Ergonomic 45mm rotary cutter features a unique comfortable handle design for both left- and right-

Rotary Cutter	P/N 01-00302
RB45-1 Replacement Blade only	
RB45-1 Replacement Blade pk of 5	
Rotany Pinking Blade	P/N 12-01700

Good For: general quilting, sewing and craft projects. Great for cutting out patterns, reduces fraying. Can be used in industrial applications.



STAINLESS STEEL SCISSORS

The OLFA stainless steel scissors (7" overall length) are extremely high quality stainless steel blades perfect for precision cutting. Ideal for use

on such varied materials as paper, fabrics, plastic, rubber, & aircraft composites......P/N 01-00303



MULTIPURPOSE PLASTIC UTILITY KNIFE

Auto-Lock-featured standard-duty model with a

pocket clip/blade snapper. For both right- and left-handed uses. Handle and all plastic parts made from 100% recycled materials. Easy disassembly for next recycling. 9mm......P/N 12-03652



L-2 CUTTER

18MM heavy-duty cutter features a ratchet wheel blade lock, heavy gauge stainless steel blade channel, highest grade carbon tool steel blade and anti-slip rubber grip insert......P/N 12-00258



NOL-1 CUTTER

Heavy-duty 18mm "HandSaver" Acetone resistant cushion grip with ratchet wheel blade lock and high-carbon tool steel snap-off OLFA blade. Cutter.....P/N 12-00257



ULTRAMAX CUTTER

Heavy-duty utility knife / cutter is an auto lock cutter includes a stainless steel blade channel

with a unique cushion handle provides a comfortable and positive grip. P/N 12-02367

H-1 CUTTER
25mm Extra heavy-duty 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 12-02970



AUTO-LOCK STAINLESS PROFESSIONAL KNIFE

Accomodates 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



EXTRA HEAVY DUTY RACHET LOCK CUTTER

25mm Extra heavy-duty cutter features: • anti-slip cushion handle for exceptional comfort and safety • chemical resistant handle for easy cleaning. Heavy guage stainless steel blade channel holds blade tight. ratchet wheel blade lock. rope loop. high-quality carbon tool steel snap-off blades for sharpness and durability.

P/N 12-02368



EXTRA HEAVY DUTY SNAP-OFF BLADE

Snap-off black blades, are made from high quality carbon tool steel. Blade container locks for safety. Fits most Extra Heavy-Duty handles. 7 cutting edges per blade.

20 blades per pack......P/N 12-02369



EXTRA HEAVY DUTY RATCHET LOCK CUTTER

Anti-slip grip cutting tool. Features an automatic blade lock, cushion grip for maximum comfort and control, and a heavy gauge stainless steel blade channel that holds blade tight. Chemical resistant handle for easy cleaning. Includes a pocket clip for convenience, and the premium, ULTRAMAX® ultra sharp durable snap-offP/N 12-02370

NERAL SPECIALTY TOOL

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.

.....P/N 12-10600 Extra 3/16" Blade......P/N 12-10700



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

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 & 32ndsP/N 729

16ths & MMP/N 12-01633

DIGITAL FRACTIONAL CALIPER



The Carbon Fiber 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 lightweight, non-marring carbon fiber construction delivers accurate readings of inside, outside, step and depth measurements.

.....P/N 12-02307 Caliper.



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.

FEELER GAGES

Blades are made of tempered steel of exacting tolerances. Each blade has its size printed 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

BRASS CALIPERS

For measuring rod diameters, plate thickness, inside and outside of tubing. 4" outside and inside measuring capacity. Heavy guage solid brass. Inside and outside graduations in 16ths and millimeters. Close tolerance dovetail design. Smooth brushed finish with lacquer coating. Finely stamped numbers and graduations.....P/N 12-03782

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

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



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.

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 light-weight 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

STAINLESS STEEL AUTOMATIC **CENTER PUNCH**

Provides accurate center punches to prevent drill bits from traveling. It has a onehand spring impact operation, no hammer needed. This is used for marking, punching & staking and it has a durable stainless steel bodyP/N 12-03515 that will not rust

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
12-00519	14	Fractional size drills 1/16" - 1/2" x 64ths	
12-00378	15	Number size drills 1 to 60	

LOCKING WING ACADEMIC DIVIDER



This 6" drafting compass is most commonly used to measure inside or outside diameters and reproduce circles and arcs. Often used with maps or architecture, the wing divider features a pencil holder to easily plot curves and lines. Lockable

wing for repeat measurements......P/N 12-04896

ENERAL 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 in a vinyl storage pouch......P/N 12-01891

INSPECTION MIRRORS



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 balland-socket joints for infinite angle adjustments of the mirror

OI III	io mimor.
1-1/4 Diam	P/N 12-01887
2-1/4 Diam	P/N 12-01888
3-1/2 Oblong	P/N 12-01889

LED-LIGHTED TELESCOPING INSPECTION MIRROR



2 extra bright LED lights facilitate the inspection of hard-to-see and hard-to-reach areas. Easily peer into the dark crevices of your work space

in search of leaks, breaks or lost tools. Telescoping shaft extends to 33 in. (840mm). Fully polished, shatter-resistant glass mirror sits on a 360° swivel, double ball joint for accurate positioning and infinite angle adjustments. Non-slip cushion grip. CE Approved.

Round Mirror.....P/N 12-03197 Rectangular Mirror......P/N 12-03199

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

DECAL ERASER WHEEL

For quick and easy removal of decals, pinstripes, bumper stickers, reflective tapes etc from glass and OEM painted surfaces without any damage. Also very effective in removing adhesive tapes and glue from the back of moldings. Best result at 1500 - 3000 rpm. Let the wheel do the work, apply light pressure only. Start

at the top of the decal and move side to side. For faster results, use entire width of the wheel, do not tilt on angle. Remove any residue with appropriate mild solvent. Natural Rubber. Diameter: 4 Inch. Width: 1 Inch. Max RPM: 4000 Universal arbor, no special tool needed. Use with electric or pneumatic tools.....P/N 12-02401



REVOLVING PUNCH

General's revolving punch plier is a convenient spring tension, self-opening tool for punching round holes in leather, plastic, rubber, canvas, cardboard and similar materials. The snap ring

pliers are used for the installation or removal of exterior and interior snap rings. Revolving turret with six hardened steel punches: 5/64", 3/32", 7/64", 1/8", 5/32", and 3/16"........................P/N 72



5PC EXTRA LONG DRIVE PIN PUNCH SET

These 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



These UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This fivepiece 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



These UltraTech Precision Screwdriver Sets were assembled in conjunction with industry tradesmen to offer the most comprehensive and reliable solutions. This fivepiece 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

PICK AND HOOK 4 PIECE SET

Get into tight places to retrieve small parts, "O" rings, and gaskets. Great for household and hobby use. Includes straight pick, 90° pick, 120° hook, and round angle hook. High-visibility handles. Screwdriver-style handles give better control. Specifications: Includes straight pick, 90° better control.

BULLSEYE PICKS





The bullseye pick was originally used in the dent repair/collision trade, but also works great for restoration work. These are ideal to reach in around the edge of

a panel, around a gusset, or into a blind area to repair the dent from the backside. By sighting the low area through the open sight, the tool will deliver accurate light blows to raise the low area. This tool includes both a regular pick and a blunt tip. The blunt tip works great for aluminum and prevents unattractive pick marks in the metal.

.....P/N 12-02292 25"P/N 12-02293

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



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



LIGHTED MAGNETIC PICK UP Powerful Bright White LED Flexible Obedient Gooseneck. Heavy-duty Anodized Aluminum Body Magnet

easily lifts 3 lbs. (1360g) Telescopes from 6 in. to 14 in. (152 - 356mm) 3 "LR44" batterie's includedP/N 12-03783

PECIALTY TOOLS

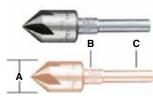
M-4 PIPER / CESSNA / MOONEY TAPER PIN TOOL



Sweating the Piper Control Wheel AD? Relax, this patent pending M-4 tool makes the hardest part of compliance with this AD easy. This specialty tool was designed to counter the frustration of removing the Piper control wheel taper pin. With the aid of the M-4 tool even the most stubborn

taper pin can be removed in minutes, not hours, without vibration taper pin can be removed in minutes, not hours, without vibration or stress being induced on your aircraft or the surrounding delicate instruments and avionics. The tool is self-indexing, locking the taper pin in position and securing itself in place for easy pin removal. Quality made in the USA and precision milled from bar stock for maximum strength, the body is Cad Plated for corrosion resistance and the press screw is Grade 8 to assure long life. The tool is shipped with detailed instructions. P/N 12-02620

5 FLUTE ROSE PATTERN COUNTERSINKS Designed with the perfectionist in mind,



these 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"

Α	В	С	Part Number	Price
1/2"	3/8"	1/4"	12-01863	
5/8"	3/8"	1/4"	12-01865	
3/4"	3/8"	1/4"	12-01864	

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

ENGRAVER FOR WOOD AND METAL



Perfect tool for engraving in plastic, metal, glass, ceramic, leather, wood, and more . Depthadjustment dial helps control the length of the engraver's stroke • 13-watt motor provides up to

7,200 strokes per minute • Lightweight 9 oz design combines with the soft-touch grip for easy handling • Includes a two-piece stencil set and a tungsten carbide tip for powerful and reliable engraving.

P/N 12-05429



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.

PLAIN TAP WRENCHES

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

CESSNA SEAT RAIL GAUGE



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

LIGHTED POWER PRECISION SCREWDRIVER

These lighted cordless precision screwdriver (502) from general tools & instruments (general) is a first-of-its-kind tool that can handle all of those difficult, repetitive fastening jobs involving tiny screws in tight spaces where it is difficult to see. it's perfect for on-the-go technicians and anyone who works with small parts and micro assemblies. Super Bright LED Light 6+ Hours of Power 100+ RPM Super-Torque Drive Cordless (2 AAA alkaline batteries included)

Screwdriver......P/N 12-03517

PRECISION OILER

These 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

REPLACEMENT BLADE OIL CAN CUTTER General Tool's Gold Standard Cutting Wheels are made



from tempered, bearing tool 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.

1/2.....P/N 12-01867 5/8.....P/N 12-01868

AARC BEARING GREASE PACKER

The Quick, Easy, Efficient way to Grease Wheel Bearings! Experience has shown that the inspection and cleaning of wheel bearings is time consuming and messy. Likewise, the AARC Bearing Packer utilizes similar principles to hand pressurize grease through the individual roller bearings for a complete - total pack of the bearings. The use of the cone or the plates assures that the grease totally encompasses the rollers in grease. This simple method is accomplished quickly with minimal waste.

P/N 12-03753



AARC BEARING CLEANER
The Quick, Easy, Efficient way to Grease Wheel Bearings! Experience has shown that the inspection and cleaning of

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
- 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 ogle-so back and forth along the work tightening the Tension Knob as required until you achieve the desired joggle depth. Joggling 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 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



KNIPEX PRECISION-SNAP-**RING PLIERS SET**

Contains common Precision Circlip Pliers for highest requirements in sturdy plastic packaging, also suitable for storage of the pliers. From 12-25 to 19-60 Straight Tip and 12-25 to 60 Bent Tip. P/N 15-08431



KNIPEX HIGH LEVERAGE **COMBINATION PLIERS**

35 % less effort required than with conventional combination pliers easier work due to optimised leverage with cutting edges (hardness approx. 63 HRC) for soft and hard wire and piano wire. Long cutting edges for thicker cables with gripping zones for flat and round material, suitable for versatile use. High-grade special tool steel, forged, oil-hardened, 200mm length. 8 inch.

.....P/N 15-08432 8 inch Pliers(pictured).. 8 inch Pliers with Comfort Grip......P/N 15-08433

KNIPEX COMBINATION PLIERS



Gripping zones for flat and round material, suitable for versatile use with cutting edges for soft and hard wire. Long cutting edges

for thicker cables cutting edges additionally induction hardened, cutting edge hardness approx. 60 HRC Special tool steel, forged, oil-hardened, 8 inch......P/N 15-08434

KNIPEX HIGH LEVERAGE COMBINATION PLIERS COMFORT GRIP



Gripping zones for flat and round material, suitable for versatile use with cutting edges for soft and hard wire. Long cutting edges for thicker cables cutting edges additionally

induction hardened, cutting edge hardness approx. 60 HRC Special tool steel, forged, oil-hardened, 6.25 inches. P/N 15-08435

KNIPEX DIAGONAL CUTTERS



The indispensable diagonal cutter for allround use with high quality material and precise workmanship for long service life.
Precision cutting edges for soft and hard

wire, clean cutting of thin copper wires, also at the cutting-edge tips cutting edges additionally induction hardened, cutting edge hardness approx. 62 HRC narrow head style for use in confined areas. Vanadium electric steel; forged, oil-hardened, 7.25 inches.

7.25 inch Pliers (pictured)......P/N 15-08436 7.25 inc Pliers with Comfort GripP/N 15-08437

KNIPEX COBRA PLIERS QUICK SET STYLE



Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work

pieces and a comfortable handle width. Self-locking on pipes and nuts: no slipping on the work piece and low hand force required. 61 HRC: low wear and stable gripping. Just position the upper jaw to the workpiece, push button and move close the lower jaw, ingeniously simple. 10 Inch P/N 15-08438



KNIPEX AUTO ADJUSTING **WATER PUMP PLIERS**

Automatic adjustment per one-hand operation both for right-handed and left-handed use with good access to the workpiece thanks to the slim dimensions in the head and joint area and flush joint bolt. Self-locking on pipes and nuts: no slipping on the workpiece and low handforce required. Gripping surfaces with special hardened teeth, teeth hardness approx.

61 HRC: low wear and stable gripping box-joint design: high stability because of the double guide. Guard prevents operators' fingers being pinched and locking lever for space saving transport with reliable closed handles. Chrome vanadium electric steel, forged, oil-hardened 10P/N 15-08439

KNIPEX PLIERS WRENCHES



Adjustable tightening tool, also excellent for gripping, holding, pressing and bending work pieces. Replaces the need for sets of metric and imperial spanners, with smooth jaws for

damage free installation of plated fittings Zero backlash jaw pressure prevents damage to edges of sensitive components. Adjustment at the touch of a button directly on the work piece and parallel jaws give a more solid grip; the construction gives infinite adjustment of all widths up to the specified maximum size.

6 Inch	P/N 15-08440
7.25 Inch	P/N 15-08441
10 Inch	P/N 15-08442
12 Inch	P/N 15-08443

KNIPEX PLIERS WRENCH-COMFORT GRIP



 Adjustable tightening tool, also excellent for gripping, holding, pressing and bending work pieces. Replaces the need for sets of metric and imperial spanners, with smooth jaws for damage free installation of

plated fittings Zero backlash jaw pressure prevents damage to edges of sensitive components. Adjustment at the touch of a button directly on the work piece and parallel jaws give a more solid grip; the construction gives infinite adjustment of all widths up to the specified maximum size.

6 Inch	P/N	15-08444
7.25 Inch	P/N	15-08445
10 Inch	P/N	15-08446

KNIPEX COBRA PLIERS



Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work pieces and a comfortable handle width. Self-

locking on pipes and nuts: no slipping on the work piece and low hand force required. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Reliable catching of the hinge bolt: no unintentional shifting and guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened. Pliers Pictured are without the comfort grip. Pictured without Comfort Grip.

5 inch	P/N 15-08447
6 inch	P/N 15-08448
7.25 inch	P/N 15-08449
7.25 inch with Comfort Grip	P/N 15-08452
10 inch	P/N 15-08450
10 inch with Comfort Grip	P/N 15-08453
12 inch	P/N 15-08451
12 inch with Comfort Grip	P/N 15-08454

KNIPEX ALLIGATOR PLIERS



More output and comfort compared to conventional water pump pliers of the same length: 9-notch adjustment positioning for

30 % more gripping capacity. Self-locking on pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Particularly suitable for outdoor work. Guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened. Pictured without Comfort Grip.

7.25 inch	P/N 15-08455
7.25 inch with Comfort Grip	P/N 15-08458
10 inch	P/N 15-08456
10 inch with Comfort Grip	P/N 15-08459
12 inch	P/N 15-08457
12 inch with Comfort Grip	P/N 15-08460

KNIPEX 3PC UNIVERSAL PLIERS SET & ALLIGATOR PLIERS



This 3pc Professional Pliers Set includes: Angled High Leverage Diagonal Cutter 8", Knipex Alligator Water pump Pliers 10", Long Nose Pliers with Cutter 8".

P/N 15-08461



KNIPEX 3PC COBRA PLIERS SET Knipex 3pc Cobra Pliers Set 7", 10", 12". Adjustment at the touch of a button directly on the work piece with fine adjustment for optimum adaptation to different sizes of work pieces and a comfortable handle width. Self-locking on

pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design. Reliable catching of the hinge bolt. Chrome vanadium electric steel, forged, oil-hardened....P/N 15-08462

KNIPEX 3 PC ALLIGATOR PLIERS SET Knipex 3pc Alligater Water pump Pliers 7", 10", 12".



More output and comfort compared to conventional water pump pliers of the same length. Self-locking on pipes and nuts. Gripping surfaces with special hardened teeth, teeth hardness approx. 61 HRC. Box-joint design.

Particularly suitable for outdoor work. Guard prevents operators' fingers being pinched. Chrome vanadium electric steel, forged, oil-hardened.

P/N 15-08463



KNIPEX 3PC UNIVERSAL PLIERS SET & COBRA PLIERS

This 3pc Professional Pliers Set includes: Angled High Leverage Diagonal Cutter 8", Knipex Cobra Water pump Pliers 10", Long Nose Pliers with Cutter 8".....P/N 15-08464



KNIPEX 2 PC MINI PLIERS WITH BELT POUCH

Knipex 2pc Mini Pliers Set includes: Knipex Pliers Wrench 6", Knipex Cobra Pliers Wrench 5". P/N 15-08465

AIRCRAFT GRADE SUPER COBALT DRILLS



These super cobalt hi-speed jobber length aircraft drill bits feature heavy duty construction to Type J aircraft specifications. Úse 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.	D
12-03791	55	-		12-04220	
12-03698	51	-		12-14221	
12-03792	44	-		12-04221	
12-04212	42	-		12-04222	
12-04213	41	-		12-04223	
12-04214	40	-		12-04224	
12-04215	36	-		12-04225	
12-04216	33	-		12-04226	
12-03793	37	-		12-04227	
12-04217	30			12-04228	П
12-04218	28			12-04229	П
12-04219	27		Ш	12-04235	П

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Part No.	Drill Size	Price Ea.		
12-04220	23	-		
12-14221	21	-		
12-04221	19	-		
12-04222	12	-		
12-04223	10			
12-04224	"D"	-		
12-04225	1/8"			
12-04226	5/32"			
12-04227	3/16"			
12-04228	1/4"			
12-04229	5/16"			
12-0/235	#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	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



SNAKE DRILL ATTACHMENT

Heavy-duty 90° flexible drilling attachment. Overall length 26". 3 Female threaded spindle sizes. 1/4-28P/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 TP258P/N 12-00368



TAP EXTRACTOR SETS

Remove broken taps and save the threads! Walton Tap Extractors let you remove broken taps without drilling, lasers, damaged threads, scrapped parts or repair inserts. The hardened steel fingers of Walton Tap Extractors fit in the flutes of a broken tap to back it out simply and safely. This effective method has been used

since 1908. They are available in every tap size, both inch and metric, as handy sets or individual pieces. The Tap Extractors will fit both NC and NF taps. Sizes: 3/16", 1/4",5/16",3/8",7/16",1/2" P/N 12-02352

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	Call for	12-07902		
10-32		price and	12-08102		
1/4-28	12-08202	availability special	12-08302		
5/16-24	12-08402	order	12-08502		
3/8-24			12-08702		

BOTTOMING TAPS (HIGH-SPEED STEEL)						
Die Size	Left-	Hand	Right	-Hand		
6-32			12-07703			
8-32		Call for	12-07903			
10-32	12-08003	price and availability	12-08103			
1/4-28		special	12-08303			
5/16-24		order	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	Die Dia.	Left-Hand		Right-l	land
6-32	13/16"	12-07001		12-07002	
8-32	13/16"	12-07101		12-07102	
10-32	13/16"	12-07201		12-07202	-
1/4-28	1"	12-07301		12-07302	
5/16-24	1"	12-07401		12-07402	
3/8-24	1"	12-07501		12-07502	I



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
1/2"	12-20905	
5/8"	12-20910	
3/4"	12-20915	
1"	12-20925	
1-7/32"	12-20935	
1-1/4"	12-20940	

	Punch Size	Model 730 P/N	Price
l	1-1/2"	12-20950	
l	1-5/8 "	12-20955	
l	2"	12-20970	
	2-1/4" 304AVBB	12-20975	
ĺ	3-1/8"	12-20980	

ROUND DIE STOCK HANDLES

For holding adjustable round split dies. Three set screw pattern. Single piece construction. Die diameter 1" or 13/16".

13/16"	P/N 12-04875
1"	P/N 12-04876

CARBIDE DRAGGER DRILL BITS

Reference NAS 965 specification with special geometry for drilling composite and composite stack ups.

Size	Carbide	4" Part No.	Price	6" Part No.	Price
#40	3000-0980	12-04547			
1/8	3000-1285	12-04549		12-04552	
#21	3000-1590	12-04551		12-04552	
#13	3000-1875	12-04553		12-04554	
#11	3000-1935	12-04555		12-04556	
#2	3000-2210	12-04557			
1/4	3000-2500				
G	3000-2610			12-04560	

HSS EXTENSION DRILL BITS

NAS 907 Type "B" and Type "J" 135° Split Point

These aircraft extension drills are manufactured to provide long life. Our cobalt drills are used for drilling in tough, high tensile strength materials like stainless steel titanium and inconel. A heavy duty flute design is incorporated and a 135° split point.

Size	Length	Part No.	Price
3/32		12-04202	
40		12-04204	
1/8		12-04234	
#30	6 inches	12-04236	
#21		12-04247	
#10		12-04260	
1/4		12-04274	
3/32		12-04391	
40		12-04393	
1/8		12-04404	
#30	12 Inches	12-04405	
#21		12-04417	
#10		12-04430	
1/4		12-04444	

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT EXTENSION DRILL BITS

Size	Length	Part No.	Price
3/32		12-04307	
40		12-04309	
1/8		12-04320	
#30	6 inches	12-04321	
#21		12-04332	
#10		12-04345	
1/4		12-04359	
3/32		12-04476	
40		12-04478	
1/8	12 Inches	12-04489	
#30	12 inches	12-04490	
#21		12-04501	
#10		12-04514	

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

HSS 1/4-28 MALE THREADED DRILL BITS High Speed Steel

- Type B Threaded Hex Shank HSS Adaptor
- Drill NAS 965 1/4-28 UNF Class 2A Thread
- · Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type B construction.
- High Speed Steel drills are for drilling general to medium duty, low tensile strength materials in confined areas.

Size	Length	Part No.	Price
3/32		12-04065	
#40	1/2 inch	12-04066	
1/8		12-04077	
#30		12-04078	
5/32	9/16 inch	12-04087	
#21	9/16 111011	12-04089	
#10		12-04103	
#9		12-04104	
13/64	5/8 inch	12-04107	
7/32	5/6 111011	12-04112	
1/4		12-04120	
3/32		12-03941	
#40	1 inch	12-03942	
7/64		12-03947	
1/8		12-03954	
#30		12-03955	
5/32	1-1/4 inch	12-03964	
#21	1-1/4 111011	12-03966	
#10		12-03979	
3/32		12-03814	
#40		12-03815	
1/8	2-1/8 inch	12-03826	
#30		12-03827	
#21		12-03838	

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT 1/4-28 MALE THREADED DRILL BITS

Cobalt

- Type D Threaded Square Shank Cobalt Adaptor
- Drill NAS 965 1/4-28 UNF Class 2A Thread
- · Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type D construction.
- · Cobalt drills are for drilling hard, tough, high tensile strength materials in confined areas.

Size	Length	Part No.	Price
3/32	1/2 inch	12-04127	
#40	1/2 111011	12-04128	
#30		12-04140	
5/32	9/16 inch	12-04149	
#21	9/16 111011	12-04151	
#10		12-04166	
5/16	0/4 :	12-04187	
3/8	3/4 inch	12-04188	
3/32		12-04004	
#40	1 inch	12-04005	
7/64	I IIICII	12-04010	
1/8		12-04016	
#30		12-04017	
5/32	1-1/4 inch	12-04026	
#21	1-1/4 INCH	12-04028	
#10		12-04041	
3/32		12-03875	
#40	2-1/8 inch	12-03876	
1/8		12-03887	
#30		12-03888	
#21		12-03899	

VISIT WWW.AIRCRAFTSPRUCE FOR A FULL LIST OF AVAILABLE SIZES.

COBALT DRILL BIT SETS

COBALT DRILL BIT SET 1-60 PIECES



Numbered 1 - 60 Drill Bit Set Cobalt. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 60 total pieces plus index box. 135 degree split point (**Note**: Bits smaller than .0625 have no split point)P/N 12-05110

COBALT DRILL BIT SET 1/16-1/2 INCH 29 PIECES



Fractional 1/16" - 1/2" 60 Drill Bit Set Cobalt. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 29 total pieces plus index box. 135 degree split point P/N 12-05111

DRILL BIT SET A-Z COBALT 26 PIECES



Letters A - Z Drill Bit Set Cobalt.. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 26 total pieces plus index box. 135 degree split point

DRILL BIT COMBO COBALT ALL BITS 115 PIECES



Combo Set Includes Cobalt: Numbers, Letters & Fractional. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. Complete set in Index Box. 135 degree split point (Note: Bits smaller than .0625 have no split point)

P/N 12-05113

DRILL BIT SET 1-60 NUMBERS HIGH SPEED



Numbered 1 - 60 Drill Bit Set High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 60 total pieces plus index box. 135 degree split point (**Note**: Bits smaller than .0625 have no split point) P/N 12-05114

DRILL BIT SET 1/16-1/2 INCH FRACTIONS 29 PIECES



Drill Bit Set Fractions 1/16-1/2 High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 29 total pieces plus index box. 135 degree split point (**Note**: Bits smaller than .0625 have no split point) P/N 12-05115

DRILL BIT SET A-Z HIGH SPEED USA 26 PIECES



Letters A - Z Drill Bit Set High Speed. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. 26 total pieces plus index box. 135 degree split point (**Note**: Bits smaller than .0625 have no split point)P/N 12-05116

DRILL BIT COMBO HIGH SPEED ALL BITS 115 PIECES



Combo Set Includes High-Speed: Numbers, Letters & Fractional. Tired of always looking for that drill bit you desperately need? Now you can have all of them right at you fingertips. All Index boxes are the highest quality made. Made in the U.S.A. Complete set in index box. 135 degree split point (**Note**: Bits smaller than .0625 have no split point)

P/N 12-05117



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 applicationsP/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 to1/2" 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 to1/2" 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.

Part No.	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

9	Part No.	Cutting Dia.	Decimal Equiv.	Flute Length	Overall Length	Price
A.	12-00579	1/16	.0625	3/4	1-1/2	
8	12-00580	5/64	.0781	7/8	1-3/4	
N 1	12-00581	3/32	.0938	1	2	
	12-00582	7/64	.1094	1-1/4	2-1/4	
8 1	12-00583	1/8	.1250	1-1/4	2-1/4	
	12-00585	5/32	.1562	1-3/8	2-1/2	
g	12-00586	11/64	.1719	1-5/8	2-3/4	
	12-00547	3/16	.1875	1-5/8	2-3/4	
n.	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	
	12-00554	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	
ĮĮ.	12-00567	1/2	.5000	3	4-3/4	

CARBIDE ROTARY - RADIUS END

Rotary files have a 1/4" shank and a double-cut (self-cleaning) burrs for quicker cutting speed and less chip build-up. Style: Cylindrical Radius End (SC-5). Diameter of cut: 1/2". Length ofP/N 12-02917

CARBIDE ROTARY FILE - BALL END
Rotary files has a 1/4" shank and a double-cut (self-cleaning) burrs for quicker cutting speed and less chip build-up. Style: Round ball (SD-1). Diameter of cut: 1/4".

Length of cut: 7/32"P/N 12-02918

SPIRAL FLUTE CHUCKING REAMER

High speed steel straight shank spiral flute chucking reamer. Diameter tolerance thru 1/2 diameter + .0002.0000. Decimal Equivalent: 0.0980. Shank Type: Straight Shank. Flute Type: Spiral Flute. Size Type: Wire Gage Size. Flute Length: 7/8. Overall Length: 3-1/2. Material: High Speed Steel. Size: 40. Type: Straight Shank / Spiral Flute. Number of Flutes: 4 Flute. Brand Name: Quality Import.

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		



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.	Diameter	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.	Diameter	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.	Diameter	Flute Length	Price
12-00602	3/8	1-1/16	
12-00603	1/2	1-1/8	



CARBIDE ROTARY FILE -**8 PIECE SETS**

8 Piece Carbide Rotary File Set. 1/4" or 1/8" shaft available.

1/8" SetP/N 12-02916 1/4" SetP/N 12-02915

TO







Locking Pliers, two straight jaws

Locking Pliers, two curved jaws

Locking Nose Jaw with wire cutter

"C" Clamps

Vise-Grip Style	Size	Part No.	Price
Locking Pliers with Two Straight Jaws	7"	12-00196	
	4"	4WR	
Locking Pliers with Two Curved Jaws and Wire Cutter	5"	12-00194	
	7"	12-00189	
Long Nose Jaws with Wire Cutter	4"	12-00190	
Locking "C" Clamps	6"	12-00188	
LOCKING & Clamps	11"	12-00195	

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

- · 1- Right angle drilling attachment
- 1- 6" Threaded Extension Rod
- 1- Chucking spud
- 1- 5'16" Threeway Wrench
- 12- Threaded Shank Drill Bits (Split into a quantity of 6 each)
- 6- Stub drill bits in the following diameters:
- 3/32", 1/8", 5/32" 3/16", 7/32" and 1/4"
 6- Stub Bits (1-1/2") in the same diameter.
- 4- Screwdriver Bits Set: Phillips #1 & #2 and Slotted

#3-#4, & #6-#8.

- · 2- 1/8" & 1/4" Threaded Collets
- 1- 5/16" Combination Wrench
- 1- Pro Kit Red Storage CaseP/N 12-11215

FLANGING-360 TOOL



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 #5 drills holes 1/4" - 1-3/8". 10 steps. UNIBIT #21 drills 13/16"-1-3/8". 10 steps.

ı	Description	Part No.	Price
	UNIBIT #1 Step Drill	12-03700	
	UNIBIT #2 Step Drill	12-03800	
	UNIBIT #3 Step Drill	12-03900	
	UNIBIT #4 Step Drill	12-03164	

LOCKING C-CLAMP WITH SWIVEL 6 INCH



Locking C-Clamp W/Swivel Pad, 6 In, **Specifications**: Size: 6", Capacity (In.): 2, Throat Depth (In.): 1 1/8, Clamping Force (Lb.): 500, Locking Mechanism: Release Lever, Screw Mechanism: Adjusts Clamping Pressure, Pliers Length (In.): 7 11/16, Finish: Nickel Plated, Material: Hardened Carbon Steel, Standards: ASME B107.36-2002

P/N 12-02422



INDUSTRIAL **FABRIC SHEARS**

Wiss No. 20W heavy-duty shears, ideal for cutting fiberglass cloth and all fabrics. Hot drop-forged steel.

Right Hand Shears.....P/N 01-00397



FISKARS 9" **PINKING SHEARS**

These orange handled pinking shears keep your projects from unraveling at the seams. Ergonomic handles give comfort

and control, extended lower blade to help lift fabric while cutting. Adds functional pinking edge to prevent fabric fraying. Tested to ensure clean cutting even through multiple layers of cloth to the tip.

P/N 12-02942



NARROW TYPE FLUTING **PLIERS**

Designed for work on aircraft components. No-mar flutting plier jaws have special

coating that will not scratch surfaces. An inexpensive quality tool. P/N 12-05628



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	



STEEL SPRING CLAMPS

This nickel-plated steel spring clamp is ideal for gluing, assembly and welding work. The comfortable vinyl coated handle makes it easy to open the clamp for 2" wide placement and the tempered spring ensures a strong hold. Keep several on hand for all projects.

P/N 12-03778



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



DOUBLE-CUT SHEARS KD-400

Variable-speed, double-cut shears feed quickly and quietly, without warping or bending your finished piece (distortion is in the waste strip). It easily follows a scribed line. The materials edges are not hardened or burred, so you get maximum use of a sheet. The swiping action of blades seals the edge of coated metals. These shears cut C.R. mild steel up to 18 gauge in

straight or contour lines at over 300 inches per minute, most grades of stainless, aluminum to .080 and plastic or Formica up to 3/32" thick. These shears are also available with a contour cutting blade 60-21C to cut tighter curves and the HS blade 60-21HS for cutting foam filledP/N 12-03806



ELECTRIC MODEL K-442

Kett's all-purpose 16 gauge power sheers 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 KD440 14GA **POWER SHEARS**

Cuts 14 gauge mild steel and most grades of stainless to 16 gauge. 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



KETT KD-446R PROFILE SHEARS

Cuts profile and flat materials up to 18 gauge, spiral duct, wire mesh and many other materials. Can cut tight curves at a radius of three inches. The blades are made of high quality steel, heat treated and precision ground. The motor is variable speed up to

2500 RPM and cuts up to 28 feet per minute. Features: • 5.0 amp pistol grip • Replaceable A-2 tool steel shear blades.• These snips cuts C.R. mild steel 18 gauge and lighter, wire mesh to 18 gauge, spiral pipe, metal studs and corrugated metal

Left Hand......P/N 12-02509



CORDLESS ELECTRIC KEVLAR SCISSOR KIT
The USATCO cordless electric kevlar scissor kit cuts aramid fibers, kevlar and other tough materials! Lightweight and maneuverable with superior ergonomic design. Requires much

less effort than cutting manually. Short rapid strokes for intricate work. This can be operated with cord and adapter for unlimited cutting time. P/N 12-02630

VAMPLIERS MINI SCREW REMOVAL PLIERS



- Remove stripped/rusted/corroded/ stuck/ one-side/Torx screws, nuts and bolts
- Designed with VamPLIERS™ Technology.
- Target screws can be extracted using top jaw or side jaw.
- · Perfect slim nose for access confined spaces.
- ESD safe handle (1x106 ~ 107 O sq)
- · Ergonomic elastomer handles for unmatched comfort.
- · RoHS Compliant for use in various industries.
- · Made in Japan from high carbon stainless steel

P/N 12-04717

VAMPLIERS PRO SCREW REMOVAL PLIERS



- · Remove stripped/rusted/corroded/ stuck/one-side/Torx screws, nuts and bolts.
- Designed with VamPLIERS™
- Technology.
 Target screws can be extracted using top jaw or side jaw.
 Ergonomic elastomer handles for unmatched comfort.
- Wire cutters hardened to HRC58±2 (Rockwell standard).
- RoHS Compliant for use in various industries.
- Made in Japan from high carbon stainless steel.

P/N 12-04718

VAMPLIERS SCREW REMOVING PLIERS



The amazing Vampliers doubles as a regular pair of pliers, as well as a handy and effective screw remover. It uses a patented vertical and horizontal serration pattern to clamp onto screws (even if they are completely

stripped) and remove them. Of course, it can also be used as a regular pair of pliers which features built-in wire cutters and wire strippers. P/N 12-04716

VAMPLIERS SLIP JOINT STRIPPED SCREW REMOVAL PLIERS



These Slip Joint VamPLIERS have the signature concave shaped jaws with vertical and horizontal serrations designed inside of the jaws. This which gives the perfect bite around a

stripped/rusted/corroded screw, nut or bolt for extraction. Compared to its predecessor, these jaws are wider to tackle bigger problem screws. Adding to its big bite is the "slip-joint" feature made with reversed body structures that allows the jaws to adjust and firmly take on bigger screws,P/N 12-04719

VAMPLIERS KIT



VamPLIERS have a signature concave shaped jaws with vertical and horizontal serrations designed inside of the jaws. This which gives the perfect bite around a stripped/rusted/corroded screw, nut or bolt for extraction. This kit features a pair of the VT001-8 VamPLIER Pro Pliers, VT001-5 Mini Pliers, and the VT001-7SJ VamPLIER Slipjoint to cover all your rusted screw problems P/N 12-04720



VAMPLIER TOOL POUCH Keep your VamPLIERS all in one place. This handy case has five individual pouches to hold your tools, and rolls up to save space in your toolbox. Note: Does not include VamPLIERS. P/N 12-04721

VAMPLIERS® RECESSED SCREW EXTRACTOR WITH 2-IN-1 BIT SET



High Quality Screw Extractor for recessed stripped screws. Easily removes stripped or damaged flathead, countersunk, and recessed screws. Saves time – No preparation required. No messy drilling required. High-Torque handle grip. 2-in-1 bit set for slightly-damaged and heavily-damaged screws.

P/N 12-05062

VAMPLIERS® SCREW REMOVAL PLIERS

Remove stripped/rusted/corroded/stuck/one-side/Torx screws, nuts and bolts. Designed with patented VamPLIERS® Technology. Long Nose ideal for hard-to-reach screws up to 5.5mm in diameter and 2.2mm in height. Wire cutters hardened to HRC60±2 (Rockwell standard) to handle tough screws. Serrations in between grips used as wire pullers. Top teeth are inter-meshed for non-slip grip. Ergonomic elastomer handles for unmatched comfort T-Shaped forged handles prevent the grip covers from twisting or slipping off. RoHS compliant for use in various industries. Made in Japan from high carbon stainless steel.

Description	Part No	Price
Long-Nose 7.5 Inch Screw Extraction Pliers	12-05052	
2 Piece Set S2A 5 Inch Mini and 6.25 Inch	12-05053	
2 Piece Set S2B 6.25 Inch and 7 Inch	12-05054	
2 Piece Set S2C 7 Inch and 8 Inch	12-05055	
2 Piece Set S2D 6.25 Inch and 8 Inch	12-05056	
3 Piece Set S3A 5 Inch Mini, 6.25 Inch, and 7 Inch	12-05057	
3 Piece Set S3B 6.25 Inch, 7 Inch, and 8 Inch	12-05058	
3 Piece Set S3C 5 Inch, 6.25 Inch, and 8 Inch	12-05059	
4 Piece Set S4AP 5 Inch Mini, 6.25 Inch, 7 Inch, and 8"	12-05061	

VAMPLIER ALL-IN-ONE ELECTRICAL SHEARS / CRIMPER



An electrician's choice shear, the All-In-One Eshears are made of high carbon steel with molybdenum and Vanadium micro-serrated blades, which are vacuum hardened for everlasting durability. They are also outfitted with sporty ergonomic handles made of Nylon and 30% fiberglass for comfort and designed for ambidextrous use.

P/N 12-04996

VAMPLIER 6.25" KEVLAR CUTTING SHEARS



High quality scissors for cutting Kevlar thread. These scissors are specially designed for cutting Kevlar material; Kevlar thread in particular. One blade is micro-serrated along the whole edge. The blades are made of high carbon

alloy steel with Molydenum and Vanadium edge 60~62, cutting edge hardness HV1200. The handles are especially designed for firm grip and to ease repetitive cutting action.....P/N 12-04994

VAMPLIER SUPER COMBO SCISSORS



A high quality multi-use 4-in 1 innovative scissors for industrial and home use. The cutting edges are sharp and micro-serrations provide a firm grip during cutting.
P/N 12-04995

VAMPLIER 8" KEVLAR CUTTING SHEARS



These shears are ideal to cut materials made from aramid and para-aramid Fibers such as Kevlar, Dyneema, Vectran, and Technora in rope, ribbon, tape or fabric form. Its blades are made of high carbon alloy steel from Japan and are infused with

Molybdenum and Vanadium (HRC 60~62) through a proprietary process to achieve a level of hardness (HV1200) to cut strong materials. P/N 12-04993

VAMPLIERS BRUTE 6.25™ **SCREW EXTRACTION PLIERS**

Vampliers World's Best Pliers VT-002-6 BRUTE-Screw Extraction Pliers for Stripped, Stuck, Security, Rusted, Specialty, Screws, Nuts, Bolts, Wire Cutter, Best Electricians, Aircraft, Maintenance Pliers, and Best

16 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

Compartment: 16 • Weight: 8 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18" P/N 12-02623

21 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

Compartment: 21 · Weight: 8 lbs · Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18" P/N 12-02622

32 COMPARTMENT STORAGE BOX



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

Compartment: 32 ·Weight: 8 lbs · Material: Prime cold rolled steel . Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 12" • Height: 3" • Width: 18" P/N 12-02621

EZ GUIDE DRAWER RACKS



Easy glide large and small racks are designed to accommodate large and small compartment boxes and create convienent, compact storage systems. Boxes can be removed and tranported to the job site. Rugged plastic inserts and scoop bottoms fit neatly into steel outer shell boxes. Optional bases raise racks off the floor.

Weight: 20 lbs • Material: Prime cold rolled steel • Interlocking and Welded Construction • Colors: Durable gray powder coat finish • Depth: 15" • Height: 8-1/8" • Width: 20"......P/N 12-02624



EASY GLIDE RACK BASERack base (20 5/8" W X 15 5/8" H X 12 5/8" D; weight 13 lbs.) is available for use with P/N# 12-02626.

· Weight: 13 lbs. · Material: Prime cold rolled steel Colors: Durable gray powder coat finish • Depth: 12-1/8" • Height: 15-1/8" • Width: 20-3/8" P/N 12-02627

AEROSPACE VALVE CORE REMOVAL TOOL



Used for rapid and safe tire deflation, Tool threads on valve stem. Releases and traps the valve core within the tool but exhausts the air

through ports, Prevents Injury to Technician and FOD (stops the valve core from becoming a missile!), and Air exhausts away from technician. Made In the USA **Small**: Examples of applicable aircraft: Boeing 757, 737 Classic/NG, 727, 717, MD88, Airbus A320 Series, Bombardier and Embraer Regional Jets, General Avaition piston and jet aircraft: Cessna piston, Beechcraft piston and turbine (Bonanza and King/Queen Air), Pilatus PC-12 etc. Large: Examples of applicable aircraft: Boeing 747,767, 777, 787, DC10, MD11, Airbus A300, A330, and A380.

LargeP/N 12-04868

QUICK ANGLE - MEASURING ANGLES AND PITCHES

A multi-functional revolutionary new tool for measuring angles and pitches. It's rare to find one

tool that will accomplish so much (miter cuts for one and duplications for another). Use this one-in-all tool to compliment and enhance your tool

GRYPSHON GRYPMAT PLUS NON-SLIP **ANTI-STATIC TOOL MAT**



The Grypmat is created by a U.S. Air Force veteran and is the inspired solution to problems he encountered as a mechanic working on the air crafts day after day. Revolutionize your workflow with the Grypmat! Working on cars, aircraft, motorcycles, boats, heavy machines, or doing projects around the house- a Grypmat is the DIYer and mechanicils best friend and the perfect holiday gift idea. Get a GRYP today.

The Grypmat PLUS's bright color options help you stay organized and lets you easily see your tools, hammers, wrenches, sockets, drill bits, nuts, bolts, and whatever else you might be working with and provides a visual management system. With Grip ability, the GRYPMAT can grip to any surface up to a 70 degree angle, with NO MAGNETS! Make any space your workspace with a Grypmat- it goes where tool boxes can't and magnetic trays won't!

Heat and Chemical Resistant and Easy to Clean - A little bit of soap and water will make it new again. For tougher messes, you can even use brake cleaner. HEAT and CHEMICAL RESISTANT - The PLUS is heat resistant up to 350¢XF, can stand up to chemicals like brake cleaner, gasoline, and engine oil. Plus it's anti-static.

Size	Orange	Price	Green	Price	Gray	Price
Small	12-06293		12-06298		12-06325	
Medium	12-06294		12-06299		12-06317	
Large	12-06295		12-06300			
Duo	12-06296		12-06301		12-06321	
Trio	12-06297		12-06302			



BOLTSTER FLEXIBLE BOLT AND FASTENER ORGANIZER

The Boltster is a must have for shops, aviation mechanics, and anyone looking to streamline their wrenching projects.

P/N 12-05554

BOLTSTER FLEXIBLE BOLT AND FASTENER ORGANIZER

The Bitster was built for accountability. The Bitster is a must have for tradesmen, mechanics, electronic repairmen, technicians, aviation repair, and anyone else looking to streamline their projects.P/N 12-05555

CLAMPTITE TOOLS



4-3/4 INCH STAINLESS STEEL / ALUMINUM TOOL EXTENDS TO 7"

With stainless steel components and an aluminum body, this tool was designed for the outdoors man, fisherman and farmer who would have it around a corrosive environment. The stainless steel components are stronger and you can just toss it in the tool box that is in the truck, boat or tractor. The tool is great for emergencies and tough wire jobs. This is the original marine grade tool.

4 3/4" Long - 7" Fully Extended P/N 12-02633



4-3/4 INCH PLATED STEEL / ALUMINUM TOOL EXTENDS TO 7"

Plated steel components with aluminum body. This tool was designed with the mechanic in mind who would have it around grease, oil and a controlled environment (non corrosive). Great for the CV boots, fuel line, thermostat housing, radiator hose and air hose type repairs. 4 3/4" Long - 7" Fully Extended.....P/N 12-02634



4-3/4 INCH STAINLESS STEEL TOOL WITH BRONZE NUT **EXTENDS TO 7"**

This tool is machined stainless steel with a one piece body and nose and bronze nut. The tool was designed with the detailed craftsman who need a long lasting tool able to hold up to extremely tough wire while clamping, binding and pulling the wire until the job is complete.

4 3/4" Long - 7" Fully Extended P/N 12-02632



TOGGLE CLAMPS

Easier to use than regular C-clamps. Quick-release style. Removable rubber pads on each screw. Gap: 1" 1-1/2" Reach.

P/N 12-02863

PRO CRIMPER III HAND CRIMPING TOOL



Ratchet tool for panel mount free hanging connectors, open barrel pins and sockets with dies 16-28 AWG. The PRO-CRIMPER III Hand Tool provides the versatility of general-purpose service of general-purpose service tools along

with the reliability and ease of use of many premium-grade tools. To reduce handle force, the linkage was designed to match the forces required to crimp large insulated terminals. The result is dramatically less hand force than comparable tools. Model: #584951.

P/N 11-14450

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 hoseP/N 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.

P/N 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 hoseP/N 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.

P/N 12-01897

AMP PRO CRIMPER II HAND TOOL



The PRO-CRIMPER II Hand Tool provides the versatility of general-purpose service of general-purpo se service tools along with the reliability and ease of use of many premium-grade tools For versatility, 75 die sets (available separately) are interchange-able, 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.

PROCRIMPER 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

XCELITE ROUND BLADE SLOT SCREWDRIVER



Xcelite 1/8 inch x 10 inch length, Regular Round Blade Screwdriver, Amber Handle 1/8" x 10" Regular Round Blade Screwdriver, Amber Handle

Features: • Regular round blade screwdriver • Blades made of AISI 6150 chrome vanadium steel, plated for protection • Handle color: Amber......P/N 12-04776



AIRLOC CROSSPIN **INSTALLATION TOOL**

This tool accommodates the two series (diameters) of Airloc (A-Spec) studs commonly found in Beechcraft and Raytheon aircraft: #2

and #5. It has a seat for each series so the cross pin can be installed and centered and operates by placing the pin into the appropriate hole where it should remain seated. Then compress the pliers to force the cross pin into the stud. Once completely clamped, the pin will be perfectly centered in the stud. Comes with complete instructions.

P/N 12-04808

BETA RING PULLER WITH SWIVEL HEAD



Aviation Beta Ring Puller with Swivel Head (Designed for a 3, 4, and 5 Blade Prop): 7" diameter body, drilled for a 3, 4, and 5 blade attachment pattern on 2 individual bolt

circles for motor size flexibility. The main shaft has 5" of travel and is driven by a 6" removable handle. The pushing cap has a non-removable, free-spinning swivel head with a large inside diameter cup. Included are 5 long threaded rods with mounting couplers, 5 short threaded rods with custom machined forks, and all associated wingnuts and washers.

For A 3 and 4 Blade Prop P/N 12-06284 For A 3,4, and 5 Blade Prop P/N 12-06283

UNIVERSAL BETA RING PULLER WITH SWIVEL HEAD FOR TURBINE PROPS



Universally designed to fit Pilatus, King Air, and other turbine aircraft! Aviation Beta Ring Puller with Swivel Head

Obsigned for a 3, 4, and 5 Blade Prop):
Large 8" diameter body drilled for a 3, 4, and 5 blade attachment pattern on 3 individual bolt circles for motor size flexibility. The main shaft has 5" of travel and is driven by a 6" removable handle. The pushing cap has

a non-removable, free-spinning swivel head with a large inside diameter cup. Included are 5 long threaded rods with modified mounting couplers, 5 short threaded rods with custom machined forks, and all associated wingnuts and washers....P/N 12-06282

DIAL TYPE TORQUE WRENCH



Dial Type Wrenches provide unmatched reliability, accuracy and durability for applications where torque measurement is extrememly critical. Models feature a memory pointer that indicates the highest torque achieved during application of torque. 2% accuracy clockwise and counterclockwise. 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. / 600 lb.in.-50 lb. ft......P/N 12-00532



INDUSTRIAL DIAL TORQUE) WRENCH

High-precision assembly operations, fastener testing (in-process/final/receiving) operations where prevailingtorque nuts are used, and auditing of fastener or assembly torque are all places where the new IDW Series will make a difference.

P/N 12-05586

QUICK-GRAB RATCHET-ACTION WRENCHES



1111

You'll have the advantages of an openend wrench, plus the convenience of ratchet action. The jaws snap open to slip onto fittings and fasteners; then, they close tightly for ratcheting. Wrenches require a 30 degree handle swing to turn a fastener. All are made of hardened steel with a black finish.

Size	Part No.	Price
5/8 Inch	12-00913	
1/2 Inch	12-03239	
9/16 Inch	12-03240	

DIGITAL FORCE GAUGE

Digital Force Gauge RS232 USB AA Battery Powered 215 x 90 x 45mm 20kg

Features:

- · Data record mode: Normal model or Peak hold mode.
- · Normal record mode: Set sampling time from 1 second to 8 hours.
- · Peak hold record mode: Set sampling time from 10 ms to 500 ms.
- · Memory capacity of normal record mode: 1 GB to 16 GB.
- Memory capacity of peak hold record mode:
- 1000 data no. (max.)

 Under Peak hold record mode, if execute the "Data record" function, the memory circuit will store 1000 data no. (max.) measuring data into the SD card per fast speed sampling time (10ms to 500 ms).

 • Under Normal record mode, if execute the "Data record" function, will
- save the measuring data along the real time value (Year/Month/ Date/
 Hour/Minute/Second) into the SD card per normal sampling time (1 second to 8 hours).
- · After save the data into the SD memory card, it can be down load the data to the Excel directly, extra software is no need. User can make the further data analysis (graphic analysis) by themselves.
- Large LCD display with back light.....P/N 10-07523

ADJUSTABLE TORQUE SCREWDRIVER

Bi-directional Accuracy of +/- 6% Indicated Value from 20% to 100% of capacity meets or exceeds ASME B107.300-2010 and ISO 6789. Incredibly durable; many owners have experienced a service life of 10+ years! Operator cannot overtorque. Clutch releases automatically when desired torque has been achieved. Scale on shaft is marked in dual incrementation (in. lbs. and NM) on Cal 36/4, kgf·cm on CAL 40. Magnifying lens improves view of clearly engraved scale. To operatie, simply dial torque setting and insert bit. Uses standard bits, adapters and sockets. Anti-backlash design enhances repeatability. Comes with FREE certificate of calibration from our ISO/IEC 17025 Accredited Calibration Laboratory. CAL 36/4 can be ordered with certification for English or SI units of measure .. P/N 12-03398

MICROMETER TYPE TORQUE WRENCH



The wrench is equipped with a reversible ratchet head or plain (non-ratcheting) head may be used in both right or left hand directions. The drive head accommodates sockets,

extensions, crowfoot adapters, and other attachments to fit a multitude of fasteners both in English and Metric......P/N 15-05531

MICROMETER ADJUSTABLE TORQUE WRENCHES



Micrometer Adjustable Ratcheting Square Drive torque wrenches are ideal for any application where: • The fastener or fitting to be tightened can be engaged with a socket. • The user changes from one torque to another often. • A high amount of rotation or limited access requires ratcheting to achieve the desired torque. • The ability to select the torque and lock it in rapidly is needed. • Simplicity of operation is needed. • Very high durability is needed. These needs are common in small quantity assembly operations and many maintenance functions; the SDR-Series tools are superb for these types of applications. Range: 40-200 in.lbs. • Graduation: 2 in. lbs • Sq. Dr.: 3/8" P/N 12-03403

MICROMETER ADJUSTABLE INTER-CHANGEABLE TORQUE WRENCHES



Note: Must be used with part numbers 12-03406 and 12-03407. See Accessories. The S/R line of Micrometer Adjustable Interchangeable Head Torque Wrenches are an excellent solution when: • The ability to change torque quickly is needed · The ability to engage fasteners with different types of heads is needed • A socket cannot be used on some of the fasteners to be tightened • It is desirable to minimize the number of torque wrenches in the location • These conditions are frequently found in maintenance applications of varying types, and in some assembly operations. When they are encountered, the CCM-Series tools are often an excellent choice. • Range: 30-150 in. lbs. • Graduation: 2 in. lbs......P/N 12-03404

3/8 INCH SQUARE DRIVE RATCHET INTERCHANGEABLE HEAD



Note: Must be used with part numbers 12-03404 or 12-03405 and 12-03407. See Accessories. This series is designated "SDRT". Ideal for use when a socket is to be used and there is significant rotation of the fastener required to complete the tightening: A socket can be used to engage the fastener. A higher amount of rotation will be needed to attain the desired torque.

P/N 12-03406

3/8 INCH SQUARE DRIVE INTERCHANGEABLE HEAD



Note: Must be used with part numbers 12-03404 or 12-03405 and 12-03406. See Accessories. This series is designated "SD". Ideal for use when a socket is to be used and there is significant rotation of the fastener required to complete the tightening: Calibrating the wrench on a torque tester, A socket can be used to engage the fastener, A small amount of rotation will be needed to attain the desired torque.

ENCHES - PLIERS -N MULTIMAS

REVERSIBLE RATCHETING TAP WRENCH No. 0 to 1/4" Reversible Tap Wrench



General's Reversible Tap Wrenches feature a fine-tooth ratcheting mechanism which adjusts on the fly for right - and left-hand use. In addition, the ratchet can be locked to transform the tool into a standard tap wrench. The self-centering, hardened-steel jaws assure the formation of straight threads in your work piece. Although designed mainly for holding taps, the Reversible Tap Wrench also works great with reamers, drill bits, screw extractors and other hand-turned tools.

P/N 12-03352

60 PIECE DRILL BIT SET



60 pc. Bright - Jobber Length - 118° Point - Wire Sizes - 95090850. Excellent general purpose drill bit. Precision CNC machined for faster, more efficient chip removal. Industrial-Grade NAS High Speed Steel (HSS). Heavy duty metal storage case. Numbered metal tip-out indexes keep bits organized. Made in the USA. Material applications: aluminum, copper, wood, plastic Size range: Wire #1-#60 P/N 12-04760

AIR CHISEL TOOLS



Aircraft structures are sensitive to tool damage during manufacture, servicing and repair but the numerous plastic and composite materials available in our products are able to deliver the levels of strength and durability required of tools systems whilst

conforming to aircraft manufacturer specifications. Strong ribbed backing air chisels that are easily reshaped. Designed to fit standard air chisel tools with a 0.401" diameter shank, this scraper system maintains the damage reduction and non-marring properties of our hand tools but is suited to heavy-duty and higher volume material removal while reducing operator fatigue.



GENERAL SCRAPPER CHISEL TOOLS

Standard width air chisel scraper. General Scrapper Chisel Tool - Soft P/N 12-02282



AT SCRAPPER CHISEL TOOLS

Steep angle for air chisel scraping delicate, narrow jobs that require less of a wedging angle. Flat Scrapper Chisel Tool - Soft





BOX CORNER SCRAPPER CHISEL TOOLS
Ideal shape for air chisel scraping tight into corners, removing material on both sides surface at once.

Box Corner Scrapper Chisel Tool - Soft P/N 12-02286



ARGE HEAVY DUTY FLAT AIR CHISEL TOOL

Wide air chisel scraper for larger areas of removal. Large Heavy Duty Flat Air Chisel Tool- Hard P/N 12-02288



ARROW HEAVY DUTY FLAT AIR CHISEL TOOLS

Narrow air chisel scraper for tight, confined areas of removal

Narrow Heavy Duty Flat Air Chisel Tool- Hard P/N 12-02289



AEROWING RAPID DESEALING SYSTEM

Pneumatic aircraft sealant scraper removal hand tool. Now smaller, lighter, vibration!

Use for decal or floor panel removal too.

The Aerowing Rapid Desealing System (RDS) is a pneumatic hand tool which significantly improves the efficiency and strain associated with removing aircraft sealants and other adhesives. The RDS may be safely used to remove aircraft sealant from inside of fuel tanks, as well as

exterior structure of aircraft, composites, windows, etc.
The pneumatic Rapid Desealing System quickly de-bonds sealant 40 times faster than traditional methods......P/N 09-06183

FEIN MULTIMASTER TOOL SET



The FEIN MultiMaster FMM 350QSL Top Kit uses the new, tool-free, snap-in Starlock mounting system for easier, safer blade and accessory changes. This comprehensive kit includes the Multimaster 350QSL and accessories for sawing, scraping, grinding, sanding and dust extraction. The Starlock mounting system increases torque transfer and power efficiency, which reduces wear and tear on the tool and extends its service life. The ergonomic handle design, minimal vibration and reduced noise make using the tool more comfortable for you. Fits all Starlock and

Starlock Plus blades and accessories.

In the box: • 1 FEIN MultiMaster FMM 350 QSL • 1 backing pad • 3 of each sanding sheet (grits 60, 80, 120, 180) • 1 perforated backing pad • 3 of each sanding sheet (grits 60, 80, 120, 180), perforated • 6 sanding sheets 4-1/2 in perforated (2 each of grits 60, 80, 180) • 1 dust extraction assembly • 1 rigid scraper blade 1 E-Cut Long-Life saw blade 1-3/8 in (35 mm) (type 160) • 1 Universal E-Cut saw blade 1-3/4 in (44 mm) (type 152) • 1 E-Cut Long-Life saw blade 2-9/16 in (65 mm) (type 161) 1 HSS segment saw blade • 1 carbide segment saw blade • 1 carbide rasp (triangular) • 1 tool caseP/N 12-00834

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 CapP/N 12-00525 Hose Pinch-off Pliers 3/4" OD CapP/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.

MILBAR SAFETY WIRE TWISTERS



Three-In-One Tool: Pliers, twisters 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 - 6"Long	12-00914			
With Automatic Return - Non Reversible				
9" Long	12-00916			

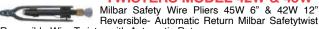
MILBAR WIRE TWISTERS

CUSHION THROAT 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/N 12-01631 6W-NOM Size 9"P/N 12-02018

ECONOMY MILBAR WIRE

TWISTERS MODEL 42W & 45W



Reversible Wire Twister with Automatic Return. Milbar 45W Reversible 6" Safety Wire Pliers have an overall length of 8-3/4" and wire capacity of .041".............P/N 45W Milbar 42W Reversible 12" Safety Wire Pliers have an overall length of

12-1/4" and wire capacity of .060"......P/N 15-06301

SAFETY WIRE TWISTERS

These top quality twisting lock pliers with automatic return are reversible, economically priced, and extremely durable. Features a sharp cutting edge and will twist up to .060" dia. safety wire.

6-INCH......P/N 12-02828 9-INCH.....P/N 12-02829



SAFETY WIRE TWISTER KIT M300

Contains 6" Safety Wire Twister and 19" Chrome Adjustable Safety Twister Tool.

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

SAFETY WIRE TWISTER KIT



04-134SR - Safety Wire Twister • 04-134SR6 - Safety Wire Twister - Mini · 43-025 - Stainless Steel Aircraft Safety Wire • 43-032 - Stainless Steel Aircraft Safety Wire · 43-041 - Stainless Steel Aircraft Safety Wire • Kit Box 13"......P/N 12-02350

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 12-01472P/N 12-01473

ATS WIRE NIPPERS



These wire nippers have hardened jaws to cut up to 12 AWG copper wires without dulling. Plus it has a FOD catching clip that will hold the shipped ends of wires before they can fly off and become a safety hazard. It's also ESD save, which means that it will not hold a static charge, thus

eliminating any chance of accidentally zapping your delicate electronics with static electricity. Convenient spring-loaded handles makes it easy to do one-handed work in confined areasP/N 12-03714

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.

.....P/N 12-16625 Safety Wire Starter Kit. Package of 18 Spare WashersP/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:

Description	Part No.	Price
Metric: (5 Thread Size) 6x1, 8x10, 8x1.25, 10x1.25, 10x1.5	12-15346	
Aero: (5 Thread Size) 8-32,10-32, .25x20, .25x28, 5/16 x 24	12-15347	

NUT SAF-T-BLOK



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 inch diameter 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 and deburr.P/N 12-15349

ALLEN II SAF-T-BLOK STANDARD

From MTE industries the Allen Saf-T-Blok2. Design for all socket head cap screws Metric and SAE. With an added plus can be used as a tubing drill guide. As with all the Saf-T-bloks, this takes the headache and hassle

out of drilling safety wire holes......P/N 12-02407

SWP8 SAFETY WIRE INSTALLATION PLIERS



The SWP8 features a diagonal nose jaw and heat-treated cutting blades, using pro-spec chrome vanadium material. The locking mecha-

nism operates with ease, as does the self-retracting twist lever, according to company officials......P/N 12-05033

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, 041). Model 100 also includes 19" chrome adjustable safety wire twister (for cavity and deep access applications. Model 200P/N 12-16650

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 counter-

sink and Allen head cap screws. Includes drill bushings and two cobalt drills. Made in U.S.A.....P/N 12-16600

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



Easy one-hand operation. Reaches into tight places, makes a fast, neat twist. Shatterproof plastic handleP/N 12-01072

EIN 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 actionP/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



11045 KLEIN 10-18 WIRE

Strips 10 to 18 AWG solid wire, easy-to-read wire gauge markings, comfortable handles with cushionP/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 ridgesP/N 12-00234

11054 KLEIN KURVE WIRE STRIPPER / CUTTER

Cuts, strips and loops 8-16 AWG Solid and 10-18 AWG Stranded wire. Precision shear-type blades for clean cuts on solid and stranded copper wire. Easy-to-read markings on both sides. Curved handles help reachP/N 12-03218 into confined areas......



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



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 selfopening actionP/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



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 th nose for quick, clean cuts. Size: 9.75".

Lifetime warrantyP/N 12-00698

KLEIN SCREW-HOLDING SCREWDRIVERS

Unique screw-holding design in which screws are held at the tip of drivers for precise placement in tight, hard-to-reach places and allows both torquing and tightening of screws. Starts and drives screws with one hand when working in hard-to-reach spaces.

1/4" SlottedP/N 12-02702



KLEIN MULTI TOOL

This cutting, stripping, and crimping tool cuts and strips 8-22 AWG solid and 10-26 AWG stranded wire with built-in, knife-type wire cutter.

P/N 12-05715

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 cut-

ting 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, plasticdipped handlesP/N 12-00231



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 in a variety of sizes and types. Relificativers 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



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. #610-5/16......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 HIGH-TENSION HACKSAW



Adjustable blade tension of up to 30,000 PSI for fast, precise cuts, along with soft touch grips for

comfort. The alternative 45-degree mounting is perfect for flush cutting, and there's a front mount for reciprocating saw blade. There's a space to store your blade in the handle, and it comes with a 12" x 24 TPI bi-metal hacksaw blade and 6" x 24TPI bi-metal reciprocating saw bladeP/N 12-02641

6" Replacement Blade.....P/N 12-03247 24" Replacement Blade......P/N 12-02706

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



KLEIN ELECTRICIAN TOOL SETS

Designed for beginner and experienced wirers, 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/cut-ters, 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

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

KLEIN DIAGONAL CUTTING PLIERS WITH TAPERED NOSE



Easy working in confined areas. Short jaws and beveled cutting edges permit close cutting of wire. Induction-hardened cutting knives for long life. Hot-riveted joint ensures smooth action and no handle wobble. Plastic-dipped handles for comfort and ease of identification. Custom, US-made tool steel.

P/N 12-03373

KLEIN LIGHTWEIGHT FLUSH CUTTERS



These shears wire up to 18 AWG producing a flat, flush cut. Shear cutting greatly reduces cutting effort and minimizes fly-off. Cushioned grips and steel return spring for increased comfort during repetitive cutting. Ultra slim profile increases access in confined areas. Heat treated for increased durability. With 1/2" driveP/N 12-03360



PISTON PIN REMOVAL TOOL

This tool takes all the work and risk out of removing the piston pin. It works on Lycoming and Continental engines. Just slip it over the piston, turn the shaft and it pushes the pin out smoothly and cleanly. Vinyl coated tip prevents scratching and marring the pin or piston during removal. Will handle up to 5.5" pistons.

P/N 12-04810

LIGHTED SCREWDRIVER - 8-IN-1



Perfect for Computers, Electronics, Industial and Residential Applications, Hobbies and Crafts. Two Super Bright LED Lights Provide 360° Tip Illumination. Transparent Collar Maximizes Illumination. Unique Design Features Two Drivers in One Handle. This is an 8 in 1 tool perfect for just about any need (Bit Sizes: #0, #000, 1/8", 5/64"; T5, T8; T6, T10). Convenient Bit Storage in Handle. Removable mini screwdriver. Cordless (3 "LR41" Batteries Included)P/N 12-03354

GREASE JOINT REJUVENATOR



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.....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 stoke • 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

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.

ATS PUSH ROD SPRING COMPRESSOR



You know how hard it is to get at the springs on the push rod tubes... Now, you can compress them and remove the tube in under a minute. Just slip this tool onto the spring and crank the shaft counterclockwise (an air ratchet works great for this) to compress the spring, and then give everything a wiggle and out it comes. It's a must-have tool when working on big bore Continentals. This tool will fit all production engines Lycoming, Continental, Franklin, and even most old radials.

P/N 12-04809



TACH DRIVE SEAL **REMOVER**

This straight forward tool will let you remove the tach seal in minutes time and time again......P/N 12-04820

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

Accessories	Teeth	Arbor	Part No.	Price
9" Stainless Steel Blade	80T	1.0"	12-01805	
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

Accessories	Teeth	Arbor	Part No.	Price
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 DrillP/N 12-01811

CUTTERS FOR MAGNETIC BASE BRILL

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 For1" DOC Cutters	12-01844	
2" Center Pin For SM437L Only	12-01847	
2" Center For 2" DOC Cutters	12-01846	

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, and1" Pilot 7/16", 1" Pilot9/16"-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	

TENSITRON TRANSDUCERS

Tensitron's transducers convert a material's tension into a reliable signal that can be used for remote indication, high-speed recording, computer hook-ups, or as input for automatic tension control systems. Note: A Signal Conditioner is needed to provide the necessary excitation, amplification, signal conditioning, calibration functions, display/readout

and other options necessary to operate strain gaged transducers.

Attention: Tensitron products may not be cancelled or returned.

TENSITRON FIBER AND WIRE TRANSDUCERS

Model No.	Description	Tension Range	Part No.	Price
E-090-00	Single Roller Low Force Load Cell	1 - 100 lb.	12-05002	
E-091-00	3 Roller Low Force Load Cell	1 - 100 lb.	12-05003	
E-095-01	Notched Beam Transducer	10 - 1,000 lb.	12-05005	
E-095-03	3 Roller Notched Beam Transducer	10 - 1000 lb.	12-05006	
E-415-002	Small Space Transducer with Single Roller	5 - 5,000 g	12-05011	-
F-1806	Platform Mounted Fiber Transducer	5 - 5,000 g	12-05013	-
FT-107	Small Space Fiber Transducer	5 - 5,000 g	12-05014	
FT-107-TIS	Small Space Fiber Transducer - Titanium	5 - 5,000 g	12-05015	
FT-116	Low Profile 3 Roller Sensor	5 - 5,000 g	12-05016	
FT-117	Single Roller Sensing Beam	5 - 5,000 g	12-05017	



TENSITRON WEB AND BELT TRANSDUCERS

Model No.	Description	Tension Range	Part No.	Price
4260	Single Roller Web Transducer.	2-200 lb.	12-05001	
E-091-02	Low Force Load Cell with Cyindrical Rollers	1-100 lb.	12-05004	
E-095-04	Notched Beam Transducer with Cylindrical Roller.	25-250 lb.	12-05007	
E-200-00	Cantilever Transducer	1-25 lb.	12-05008	
E-202-00	Pillow Block Load Cell Transducer	25-1,000 lb.	12-05009	
E-210-00	S Column Transducer	5-250 lb.	12-05010	
E-415-003	Small Space Transducer with 3 Rollers	5-5000 g.	12-05012	



OMEGA-NEWPORT INFCS TRANSDUCER SIGNAL CONDITIONERS

Model No.	Description	Part No.	Price
INFCS-000 B	Infinity Basic Signal Conditioner, 115 VAC	12-05023	
INFCS-001 B	Infinity Basic Signal Conditioner, 115 VAC Analog Out	12-05024	-
INFCS-010 B	Infinity Basic Signal Conditioner, 115 VAC Dual 5A Relays	12-05025	
INFCS-011 B	Infinity Basic Signal Conditioner, 115 VAC Analog Out & Dual 5A Relays	12-05027	
INFCS-100 B	Infinity Basic Signa Conditioner, 230 VAC	12-05028	
INFCS-101 B	Infinity Basic Signal Conditioner, 230 VAC Analog Out	12-05029	
INFCS-110 B	Infinity Basic Signal Conditioner, 230 VAC Dual 5A Relays	12-05030	
INFCS-111 B	Infinity Basic Signal Conditioner, 230 VAC Analog Out & Dual 5A Relays	12-05031	
INFCS-411 B	Infinity Basic Signal Conditioner, 10 to 30 VDC Analog Out & Dual 5A Relays	12-05032	

SIOMETERS - SWAGEI

T5 2000 SERIES CABLE TENSIOMETERS

The familiar T5 Tensiometer is a low cost, highly accurate, precision instrument giving cable tension readings covering a wide range. In use, each T5 instrument is calibrated at the factory and is provided with its own calibration chart for the simple conversion of readings into pounds- tension. The charts shown,

indicate the riser which must be used to accommodate the various cable sizes and tensions. The T5 is a small, lightweight, precision instrument, durably constructed for long accurate service.

Model No.	Cable Size	Range	Part Number	Price
	1/16", 3/32", 1/8"	2", 1/8" 10-100		
T5-2002-101-00	5/32", 3/16"	15-150	12-01144	
	7/32", 1/4"	25-150		
	1/16", 3/32", 1/8"	30-200		
T5-2002-104-00	5/32", 3/16"	30-300	12-04805	
	7/32", 1/4"	30-300		

KENT-MOORE 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. Attention: Tensiometer Products may not be cancelled or returned.

For 1/16", 3/32", 1/8".....P/N 12-19200

TENSITRON ACM 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.

Attention: Tensiometer Products may not be cancelled or returned.

Model	Part No.	Price
ACM-100 - Designed to measure from 5-100 lbs tension in 1/16", 3/32", 1/8", 5/32" diameter cables.	12-01050	
ACM-200 - Designed to measure 20-200 lbs tension in 1/16", 3/32", 1/8", 5/32", 3/16", and 1/4" diameter aircraft cables.		
ACM-400 - Designed to measure from 40-400 lbs tension in 3/32", 1/8", 5/32" and 3/16" diameter standard cables.	12-01053	
ACM-600 - Measures tension from 40-600 lbs in 1/8", 5/32", 3/16" and 1/4" diameter aircraft cables.	12-01362	

TENSITRON ACX-SERIES DIGITAL AIRCRAFT CABLE TENSION METERS

In its 5th generation of digital aircraft cable tension meters, Tensitron is using the latest technology, software, and design improvements providing unsurpassed accuracy and resolution for numerous material sizes and tension ranges. Select the cable size from the menu, press "Enter", engage the meter, and instantly see the actual numeric tension value on the display while simultaneously a dynamic colored bar graph indicates whether the tension is in the user's accept-

able range. Attention: Tensiometer Products may not be cancelled or returned.

Model	Range	Res.	Standard Cable Selections	Part No.	Price
ACX-100-1	5-100 lbs	0.5 lbs	1/16", 3/32", 1/8", 5/32"	12-03758	
ACX-250-1	20-250 lbs	0.5 lbs	1/16", 3/32", 1/8", 5/32", 3/16"	12-03759	
ACX- 250-M-1	20-250 lbs	0.5 lbs	2.0 mm, 2.5 mm, 3.5 mm, 4.0 mm	12-03761	
ACX-500-1	40-500 lbs	1 lbs	3/32", 1/8", 5/32", 3/16"	12-03762	
ACX-CWT-1	20-250 lbs	0.5 lbs	CWT-5, CWT-10, CWT- 15, CWT-20, CWT-25	12-03763	-
ACX-CMB-1	20-250 lbs	0.5 lbs	1/16", 3/32",1/8", 5/32", 3/16", CWT-5 thru CWT-25	12-03764	
ACX- CMB-M-1	20-250 lbs		1/16", 3/32",1/8", 5/32", 3/16", & 2.0 mm, 2.5 mm, 3.5 mm, 4.0 mm	12-03766	

LOCOLOC® HAND SWAGER NO. 1-SC



Designed for swaging copper and aluminum 1/16, 3/32, 1/8, 5/32 and 3/16 oval and stop sleeves, plus 7/32 stop sleeves, total of 11 sizes plus the ability to cut up to 7/32 diameter aircraft quality steel cable. A multi cavity hand cable swaging tool with a dozen functions. 26 inches long, weighs 6.5 pounds. Parts list included with each cable swaging tool. To assure proper swaging of Locoloc® aluminum, copper and stainless steel sleeves there is a Locoloc "Go" "No Go" gauge with each cable swaging tool......P/N 12-12400

LOCOLOC® TRIPLE CAVITY HANDSWAGER



Locoloc® Triple Cavity Handswager is made of 4140 Carbon Steel Hardware for superior longer life. This has 3 cavities for the most commonly used sleeve sizes: 3/32", 1/8", 3/16". Eliminates confusion on the job site. It has an Adjustment Bolt for calibration.

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 SleevesP/N 12-00222

LOCOLOC® 0-3/32SC HANDSWAGER



Eye, lap and stop sleeve splicing of cables are made sure and easy with the new handswagers. Design features "over-center" leverage, which transmits a powerful snap-action to the final thrust of the jaws... assuring a tight, clean compression every time. Easy adjustment. Individual replacement parts are available. Parts list included with tool. To assure proper swaging of Locoloc® aluminum, copper and stainless steel sleeves Locoloc® includes a "Go/No-Go" gauge with each cable swaging tool free of charge.

Specifications: • Swages 3/32" oval and 3/32", 1/8" stop sleeves, plus 1/8" stainless steel oval sleeves • Length: 20" • Weighs 4.2 lbs. P/N 05-22402

NICOPRESS SWAGING TOOLS - 64-CGMP



The 64-CGMP has four grooves and is used for Oval Sleeve in the range of cable sizes from 1/16" through 5/32". The "C" groove is also used for the No. 871-1-C Stop Sleeve. The No. 63V-XPM has three grooves and is used only with Oval Sleeves. For cable sizes 1/8", 5/32" and 3/16".

		Slee	Swagin	g Tools		
Cable Dia	Plain Copper		Plain (Conner		64-CGMP	63V-XMP
1/16	MS51844-42	18-1-C	MS51844-22	28-1-C	Х	
3/32	MS51844-43	18-2-G	MS51844-23	28-2-G	Х	
1/8	MS51844-44	18-3-M	MS51844-24	28-3-M	Х	Х
5/32	MS51844-45	18-4-P	MS51844-25	28-4-P	Х	Х
3/16	MS51844-46	18-6-X	MS51844-26	28-6-X		Х

64-CGMP......P/N 12-02560 63V-XMP

ECIALTY TOOL

NO-GO GAGE



There are five measurements required for each

OVAL AND STOP SLEEVE GAUGE 7/32-5/16



To assure proper swaging of Locoloc® aluminum, copper and stainless steel sleeves with Locoloc® tools these simple, "Go" "No-Go" Gauges will determine if your tools are out of adjustment or alignment.

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. 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. Stop sleeves must also be properly compressed and gauged to reach their rated loads which is 1/32 to 5/16 the breaking strength of the cable, depending on cable diameter.

Specifications: • GA-2P - Gauges 7/32", 1/4", 9/32", and 5/16".

Made In The USA: YesP/N 13-24627



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



VENTURI REMOVING TOOL

Venturi extractor tool used on Marvel-Schebler®, MA-3® and MA-4® series carburetorsP/N 12-01908

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.

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

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.

Felco No.	Max Cutting Dia.	Length	Weight	Part No.	Price
C2A	2mm	8"	.625 lbs	12-00223	
C7F	3/16"	8"	.625 lbs	12-01135	
C9	1/4"	13"	1.6 lbs	12-00179	
C12	3/8"	19"	3 lbs	12-01174	
C16	5/8"	22"	5 lbs	12-05133	



1/4 INCH AIR DIE **GRINDER - VT3000**

- 1/4" Air Die Grinder VT3000
- Lightweight powerful compact design
 VT3000- 25,000 RPM

- All ball bearing construction for longer tool life
 Self-locking safety throttle lever to prevent accidental starts
- Ergonomic positive grip
- Rear exhaust......P/N 12-02550



1/4 INCH AIR DIE GRINDER - VT3000A • 1/4" Angle Type Air Die Grinder VT3000A

- · Lightweight powerful compact design
- All ball bearing construction for longer tool life
- · Self-locking safety throttle lever to prevent
- accidental starts
- Ergonomic positive grip
- Rear exhaust......P/N 12-02551



1/4 INCH AIR DIE GRINDER - VT3001A

- · 105° angle type head
- Direct drive no bevel and pinon gears to maintain · One piece casting
- Ergonomic design for operator convenience
- Safety throttle lever • Rear exhaust......P/N 12-02553



DILLON MECHANICAL FORCE GAUGE

Model X-C comes in nine capacities ranging from 50 lb to 25,000 lb or 50 to 10000 kg. Allfeature accuracy of ±1% of full capacity, except the 25,000 (10000kg) capacity instruments which are accurate to ±2% of full capacity. Local is applied against a hardened hall ity. Load is applied against a hardened ball which rotates to maintain vertical alignment as pressure increases. The ball is held in place

with a spring clip or retainer. A threaded mounting hole is located opposite the loading ball in the bottom of the beam. Model X-C is available in pound and kilogram capacities.....P/N 12-03326



DZUS SNOOPY TOOL
Classic tool designed for Dzus fasteners found on warbird and antique airplanes. Tool matches the

most common size slots in 1/4 turn fasteners, giving the tool the distinctive "snoopy" shape. This tool is made from heat treated 4130 aircraft steel, with a riveted wooden handle – exact copy of the original tools.

Made in the USA.P/N 12-04763



QUICK-CHECK TENSION METERS
The Dillon Quick-Check can be placed on a cable, measure its tension, and removed in under five seconds! There are no complex lookup tables, no conversion charts. The operator can

quickly select from 15 different wire sizes and types stored in Quick-Check's memory. The Check-Tensioning mode graphically displays the current and target tensions for extremely quick setting of line tension. Even the infrequent battery changes are quick. The Quick-Check can be employed in many industries to ensure proper tensioning. Typical applications include tower and stack guy wires, pretensioned cable barriers, bridges, elevators, winch rope, overhead electric transit wires, fall arrest systems, aircraft cables and utilities.

Features: • Sheaves with bearings eliminate friction and provide the best accuracy · Accommodates a wide range of wire sizes and styles Telescoping handle engages meter quickly with minimal effort • Highly visible yellow finish • Easy-to-read display with full-text prompts • Easy to use soft-key interface • Uses popular AA batteries and has long life between changes.

2000 Lb.P/N 12-03324 10000 Lb.P/N 12-03325



AN VISE JAWS

Generally AN Vise Grips are cheap castings that lack the precision mating surfaces necessary to avoid unsightly tool marks on your fresh hose assemblies. This is especially true with black anodized fittings so prevalent today. Get rid of your old vise jaws and stop using the sharpie to cover mistakes.......P/N 04-03665

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	Part No.	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	-



DEBURRING & SCRAPING KIT



PRO SERIES STRUT SERVICE TOOL



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



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

10X STRUT PUMP



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.



STRUT SERVICE TOOL

Service Strut in your Sunday Suit.

- Clean way to service struts.
- 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 chargeP/N 12-16792



BOGERT PRESSURIZED STRUT FILLER 16M-PSF

Finally a real time and money saver! This tool changes the way landing gear struts are serviced. No longer do you have to put an aircraft up on jacks to add fluid to and fill Oleo type landing gear. This is a totally clean and safe process. No oil is spilled. The strut valve is not disturbed and the plane is sitting on the ground the whole time. This is safe for the technician and the aircraft. Features: • It is a convenient, small, compact system, easy to use, and neat to store • Two

STRIPING – SPRAY SYSTE

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 striper's 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 striper's 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	Part Number	Price
Deluxe Kit (Includes 3 Srtiping Heads)	12-01696	
Professional Kit (Includes 7 Srtiping Heads)	12-01695	

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 - plasticP/N 12-16820 Mini-Air Vacuum - aluminumP/N 12-16821

HAND VACUUM/PRESSURE PUMPS



Mityvac vacuum gauges are scaled 0 - 30 inches of Mercury (0 - 100 kPa). Compound gauges included on dual vacuum/pressure converter pumps are scaled 0 - 30 psi (0 - 200 kPa) pressure, and 0 - 30 inches of Mercury (0 - 100 kPa) vacuum. All Mityvac pumps produce vacuum at the front port. Dual converter pumps are capable of producing vacuum or pressure at the front port. A rotating knob on the side of the pump allows the operator to switch between vacuum and pressure. Dual converter pumps include a compound gauge for indicating levels of both. All Mityvac pump vacuum/pressure ports fit standard 1/4" (6.4 mm) ID tubing.

Features: • Produces vacuum or pressure at the turn of a switch · Comfortable ergonomic design · One-finger trigger vacuum/pressure release • Pressure and vacuum are created on the squeeze stroke for superior accuracy and control · Includes durable, accurate gearless diaphragm style compound vacuum/pressure gauge with pinned connection for 360° rotation.

Specifications: • Pump Displacement: 1 in3 (16cc) per stroke • Max. Pressure 30 psi, 207 kPa • Material: PVC • Vol. per Stroke: 1 cu. in. / 16cc · Gauge1: Yes · Dual Converter2: Yes · CE Certified: Yes · Weight: 11.5 oz 326 g • Country of Origin: China, Designed and quality controlled in the USA.

DeluxeP/N 15-08422



AXIS HVLP PAINT SPRAYERS

The Axis series of paint sprayers is designed to take the guesswork out of choosing a spraying

take the guesswork out of choosing a spraying system which can be confusing for the home-builder 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 Lexar spray gun. Selections of the three systems shown below based on type of material you will 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.

by otorno for timo processo orra openial oracle basis.
Sys. 1 to paint aircraft covered in fabricP/N 12-15920
Sys. 2, to paint composite structureP/N 12-15930
Sys. 3, to paint over metal or woodP/N 12-15940

ACCESSORIES

Lexair Gun......P/N 12-01385

AXIS GUN WITH BOTTOM FEED - QT CUP



Features a heavy duty chrome plated die cast aluminum gun body. The stainless steel needle and nozzle, chrome plated brass air cap, and 6061-T6 anodized aluminum nozzle holder are all CNC machined to tight tolerances. The three position floating air cap offers the ultimate in pattern control. The Pro Series spray gun features and exclusive Teflon packing design for long life and easy adjust-ability. The Pro Series spray gun has no O-rings and is gun washer

safe and impervious to all solvents. • Pressurized Cup helps atomize paint better • All Metal Construction • One Quart Bottom Feed Cup • Includes 1.0 Needle/NozzleP/N 12-03321



QUICK DISCONNECT FITTING

Weight: 0.5 lbsP/N 12-03320



CITATION HVLP PAINT SPRAY SYSTEM HALF MASK

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



AXIS HALF FACEMASK ASSEMBLY

Comfortable neoprene half facemask with durable strap assembly provides maximum seal with a wide sealing edge that fits securely against the face. You'll find it's a pleasure to wear. Add a Pullover Painting Hood (P/N 12-03317) and Lens Protectors (P/N 12-03318) for complete head and eye protection. Weight: 2 lbs.

P/N 12-03316



PULL OVER PAINTING HOOD Durable full protection hood designed to be worn over any

Axis Products, Inc. half facemask air supplied respirator system. Large 16" x 6 1/4" viewing area. Air pump supplies seven cfm of cool fresh air which circulates around the hood and exits around the neck. Don't forget to protect your lens with Hood Lens Covers (P/N 12-03318) Caution: This hood is designed to be worn over air supplied half facemask system only!

P/N 12-03317



AXIS AIR SUPPLIED TYVEK PAINTING HOOD

The Air Supplied Tyvek Painting Hood is durable and provides full protection. Large 16" x 6 1/4" viewing area and ratcheting headband for a secure fit are included. When used with any Hobbyair System it will supply cool fresh air to the hood, which circulates and exits around neck. Air flow prevents lens fogging. Don't forget to protect your lens with Hood Lens Protectors (P/N 12-03318).

Painting Hood......P/N 12-03319 Hood Lens Protectors......P/N 12-03318

PREVAL SPRAY GUN

Sprays paints, primers, gel coats, lubricating oils, cleaners, zinc chromate, etc. The Preval Sprayer is a professional grade spray system that is good for countless applications. It's disposable, recyclable, easy to clean, and, best of all, no compressor is needed. The Preval Sprayer's patented venturri vacuum process pulls liquid from any compatible, removable, and refillable container, and delivers a professional-grade. and refillable container and delivers a professional-grade spray stream to virtually any surface. It's amazing.

- · Easy replacement and cleanup with interchangeable and disposable parts
- · Customize your color or use with the medium of your choice
- · Store media in containers for easy reuse
- · Great for DIY projects
- · Professional- grade finish

#267 Complete Set	P/N 09-00339
#268 Power Unit	P/N 09-00340
#269 Product Container	P/N 09-00341



PREVAL PROPACK SPRAY SYSTEM

Deliver twice the spray with the Preval Pro-Pak: two complete Preval Spray Systems in one money-saving package. Each versatile Preval sprayer is made in the USA and delivers 16oz. of almost any paint or liquid, offering unparalleled versatility for small projects and touch ups.

In The Box:

- Preval Sprayer Units
- 2 Glass bottles
- 2 Long dip tubesP/N 09-04560



PREVAL VALPACK SPRAY SYSTEM

Preval Sprayers' best value for your workshop, garage, job site and around the house

The Preval Val-Pak is a complete assortment of Preval Sprayers and sprayer accessories. This cost-effective kit provides everything you need to apply multiple types of paints, chemicals, finishes, coatings and most other liquids in a multitude of prep, touch up and maintenance applications.

Ideal for commercial use and DIY projects, every Preval Power Unit atomizes up to 16oz. of virtually any liquid.

Included with the Val-Pak kit are accessories and extra bottles that enable you to switch easily between different liquids for different projects, then store the remaining material in the reservoirs for later use. Easy to clean. Each Power Unit can be reused for multiple applications. In The Box:

 1 – Preval Sprayer with bottle and tubes
 1 – Preval vGrip
 2 – Preval Replacement Power Units • 8 - Spray buttons • 4 - 6oz. glass reservoirs 4 – 6oz. plastic reservoirs (solvent proof)
 4 – 3oz. plastic reservoirs w/cap (solvent proof) • 8 - Bottle lids • 4 - Short dip tubes • 16 - Long dip tubes

Made in the USA......P/N 09-04531



PREVAL UNIVERSAL **VGRIP HANDLE**

vGrip Universal Handle is a 2-in-1 gun handle and ergonomic trigger that snaps onto the Preval Sprayer with ease. Also attaches to any other standard aerosol can. (handle only). This is a replacement part for the Preval Valpack (09-04531). P/N 09-04563

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	Part No.	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 Magni- fying Telescoping Mirror	2-1/8" x 3-1/2"	11.25" to 14.25"	12-01152	
K-2 Rectangular Telescopic Inspection Mirror	2-1/8" X 3-1/2"	11-3/8" to 15-1/4"	12-05311	

Description	Part No.	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 Circular Telescoping Mirror Dia. 3-1/4" Length 6.5"- 29". Double ball-joints of tempered spring steel move freely, hold desired position for viewing to 360°	12-01091	
HTC-2LT with 2.25 LED case illuminates darkened areas - two lithium batteries included. Allangle 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	



ACCESSORIES

Mirror Size: Dual 1"x2" Weight: 2 oz. Refill mirror for 1" x 2" oval inspection mirrors. P/N 12-01084



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 Replacement Lamp...P/N 12-15110 Inspector Replacement Mirror .. P/N 12-15115

VAC BLAST PORTABLE VACUUM BLASTER



This portable 28-gallon vacuum unit blasts, removes and recycles abrasives in one operation. It works with glass beads, aluminum oxide, steel grit, garnet, plastic grit, walnut shells, corn cobs and more. Rolls easily on 6-inch wheels. What's included: (1) 28-gallon vacuum blaster (1) 8-ft. air and vacuum hose (1) Gun and brush assembly (1) 6-ft. power cord (2) Wheels (1) Replacement nozzle. Specifications: Operating PSI: 115 - 140 (Max), Capacity: 28 gallons, Vacuum moter: 1100 watt, 120V, 1.5 HP, Air Consumption at Load (CFM): 15 at 80 PSI, Body Material: Steel, Body

Finish: Powder-coated, Recommended Media: Glass beads, aluminum oxide, steel grit, garnet, plastic grit, walnut shells, corn cob, Hose length (ft.): 8, Nozzle Size (in.): 1/4, Tire Size (in.): 6 Dimensions L x W x H (in.): 15 x 15 x 41, Manufacturer Warranty: 1 year limited warranty, Ship Weight: 88.0 lbs........P/N 12-02647

MONSTER BLAST CABINET

The Monster Blast Cabinet is constructed of 14-gauge steel for strength and durability. It features a built-in dust collector and large work area to handle bigger pieces. Foot pedal control and side-mounted light switches for easy control. What's included: (1) Blast cabinet (1) Blast Gun (4) Nozzles (two 7/32in., two 9/32in.) (1) Air regulator (2) Blast gloves (1) Foot pedal (4) Fluorescent lights (5) Extra window and (5) extra light underlayment sheets. Features: Large front

door for easy loading. Heavy-duty 90 CFM dust collector improves visibility during blasting. Rear-mounted dust collector saves floor space. Convenient foot pedal operation. Large work area. Large viewing window: 30 inches x 15 inches. Heavy-duty steel grate holds up to 400 pounds! 4 fluorescent bulbs provide a very bright work area. Monster-sized 443 pounds! Heavy-duty 14 gauge steel has a resilient powder-coated finish. Gas-charged hydraulic hinges provide smooth and easy opening / closing Power controls are lighted and within easy reach on side of cabinet Blast-gun hook inside cabinet.

P/N 12-02648



BLASTING ABRASIVES

Removes paint/corrosion/rust from military, commercial and private aircraft while preserving anodized and alclad surfaces. Customers and usages include: Bell Helicopter Textron, U.S. Air Force, U.S. Navy, U.S. Marine Corps, U.S. Army, Pratt & Whitney, Commercial Airlines (MRO), FAA Repair Stations, turbine blades. Note: Priced and sold in 25 lb bags.

Model No.	Description	Part No.	Price
T-2 Urea	T-2 Urea, with a Barcol Hardness of 54-62, is our most versatile plastic blast media. It is highly suitable for a broad range of cleaning and stripping applications, including aircraft, automobiles, marine vessels, trucks, and trailers. Superb results can be expected in the removal of paints, anticorrosion coatings, hydrocarbon deposits, waxes, oils, adhesives, and sealants, to name a few. T-2 for optimum results on a variety of applications!	12-03810	
T-3 Melamine	T-3 Melamine, with a Barcol Hardness of 64-72, is our most aggressive, fast blast media. It is highly suitable for a broad range of cleaning and stripping applications, and is highly desirable for replacing glass beads and other harsh abrasives. Best results can be expected in the removal of stubborn paints, printers, hydrocarbon deposits and other hard materials such as molds, engines, iron, and steel. T-3 for maximum aggression and performance on harder substrates!	12-03811	
T-5 Acrylic	T-5 Acrylic, with a Barcol Hardness of 46-54, is especially suited for a broad range of applications that require high stripping rates coupled with the need to insure surface integrity. T-5 Mil Spec media meets or exceeds the requirements set forth in Mil-P-85891A. Ideal for aircraft components, it is also excellent for powder coating removal from pultruded aluminum parts, thin fiberglass components, thin gauge metals, and of course, aircraft components. T-5 Mil Spec for optimum results where surface integrity is a must!	12-03812	



CABINET BLASTERS

100 CFM dust collector included with all steel cabinets. HD 14 gauge steel - welded seams. Full width top door. Optional additional side door. Optional foot pedals or ALC pistol grip trigger gun. High quality lined 24" gloves. Cushioned foam armholes.

Specifications: Work Area: 36" or 48" or 60" W x 24"H x 24"D, Height: 60", Door Options: Double Doors, Top Door Opening: 13" x 35", Side Door

Opening: 11" x 17", Gun Options: Foot Pedl, Weight: 36" - 272, 48" - 303,

00 - 333.	
Cabinet 36"	P/N 12-02563
Cabinet 48"	P/N 12-02564
Cabinet 60"	P/N 12-02565

PORT-A-BLAST SANDBLASTER



The Port-A-Blast sand blast gun is a complete sand blast unit. Fill the container with the abrasive material, connect the gun to your air line and it is ready to go to work. Will operate on air pressure as low as 60 PSI. However, for best results, pressures of 100-500 PSI are recommended. The greater the pressure the faster the cutting. The gun can be used to siphon abrasives or liquids

directly from a hopper or bucket, using a flexible siphon tube, and eliminating the 1Qt. container.

Compatible Abrasives: • Silica Sand - the cheapest and most widely used for average work • Glass Beads • Black Beauty Abrasive Aluminum Oxide Abrasives - for fast cutting and fine texturing and etching · Nut Shell Abrasives - for cleaning and polishing hard under surfaces without scratching • Metal Shot - for removal of hard surfaces such as porcelain.

Port-A-Blast Gun	P/N 12-00172
Flexible Siphon Tube	P/N 12-00173
Replacement Ceramic Nozzle	P/N 12-00493
Steel Nozzle	P/N 12-05604

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.

Spec. Chart	Model 1000
Operating Pressure	60-125 psi
ASME Tank	Yes
Sandblast Hose	10 feet
Abrasive Capacity	100-120 lb.
Nozzle Size	1/8"
Part Number:	12-20735
Price:	

ABRASIVES - Black Beauty: Economical, fast cutting abrasive. For quick removal of paint and rust. 80# bag....P/N 12-20740

DUAL STATION BLASTING CABINET

2 operators can blast simultaneously. No long delays for moving blast items, operator can simply change stations. 2 siphon blast guns. 2 90 CFM dust collectors. 4 Bright florescent tube lights. 2 pairs of 7"x33" blast gloves. 2 Air pressure regulators. 2 Foot pedal controls. 10 Extra protective window underlays. 5 Extra protective light underlays. 8 Extra protective light underlays. 8 Extra nozzles - 4 Ea. 6mm and 7mm. Lighted power controls. 1 Year warranty. P/N 12-04818



BLASTER KIT (F-50)

Use dry abrasives only. Hose length - 7ft. Tank capacity - 50lbs. Free standing open top tank. Maximum 125 psi. 7 CFM@80 psi minimum. Lightweight and portable. Easy setup. Steel nozzles - 13/64", 1/4", 5/16"

P/N 12-02548



BLASTER KIT (F-90)

Use dry abrasives only. Hose length - 10 ft.. Tank capacity - 90 lbs. Strong tubular steel cart. Wheels - 6". Maximum 125 psi. 7 CFM@80 psi minimum. Lightweight and portable. Easy setup. Steel nozzles -13/64", 1/4", 5/16".

P/N 12-02549



TRIPLE DOOR BLAST **CABINET**

48x24" Triple Door Blast Cabinet Features: • Full width top door • Two side doors • Foot pedal • Flourescent light • 90 CFM dust collector attached Pressure regulator • Replaceable window underlays • Includes 4 nozzles · Some assembly required.

P/N 12-02858



BENCHTOP CABINET BLASTER

30x20" Bench Top Blast Cabinet Features: • Made of tough LDPE polymer · One-piece construction (no leaks) • Self-adhesive underlay • Pistol grip trigger gun • Overside top window/ door

Specifications: • Work area: 30"W x 27"H x 20"D • Height: 28" • Weight: 34 lbs.....P/N 12-02857

TIG TORCHES & REPLACEMENT CABLES



TIG TORCH OUTFIT 125 AMP

125 amps, light duty, air cooled torch outfit with flex head, Superflex cable, and 35M dins gas through connector.

P/N 12-00391

REPLACEMENT CABLE

12-1/2 foot Superflex replacement cable for the 12-00391. P/N 12-00399

TIG TORCH OUTFIT 210 AMP

210 amps, heavy duty, air cooled torch outfit with Superflex cable and 35M dins gas through connectorP/N 12-00392

REPLACEMENT CABLE

12-1/2 foot Superflex replacement cable for 12-00392. P/N 12-00401



TIG TORCH ACCESSO-RY 9 GAS LENS 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.

Specifications: 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



TIG TORCH ACCESSORY 17H GAS LENS 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

P/N 12-00394

BRAZING AND SILICON BRONZE



Tig Silicon Bronze .062P/N 12-00470



FULL ARM WELDING GLOVES

Full Arm Welding Gloves. Industry First! -21" glove with heavy duty padding on the forearm and elbow for comfort. Super supple Genuine American Deerskin tanned in U.S.A. Boarhide™ leather heat shield patch, reinforced palm, cuff and lean-on patch. Sock-lined FR (flame resistant) cotton fleece insulated. Boarhide™ leather pull-strap. Sewn with Kevlar® thread. Complimentary 3" carabineer to keep gloves together with exclusive Caiman® loops on each pair. Kontour™ - Exclusive 3-Dimensional, precurved fingers, and form-fitting design for ultimate fit, comfort & dexterity. Patches, padding and reinforcements for comfort & protectionP/N 13-20151



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.)



TIG TUNGSTEN

P/N 12-05186

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	
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

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







12-00449

12-00451

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





3M SPEEDGLAS BLAZED WELDING HELMET 100

3M™ Speedglas™ 100 Welding Helmets deliver outstanding protection, comfort and performance with distinctive graphic designs. Welders can benefit from its excellent optical quality and reliable light-to-dark switching at a highly affordable price. The Speedglas



FULL FACE SHIELD

Lightweight headgear, shield flips down over prescription glasses. Good over bifocals.

P/N 12-05175







TWO-IN-ONE 'R' GRADE HOSE FOR ACETYLENE irean Hose: Overgen Red Hose: Acetylene Length



Green Hose: Oxygen. Red Hose: Acetylene. Length: 12-1/2" (3.8m). Diameter: 3/16" (5mm). Weight: 2-1/2 lbs (1.1kg). Use with AW Torch Series. "A" 3/8-24 & "B" 9/16-18 Hose Fittings...... P/N 12-01198

TO

COBRA STANDARD TORCH KIT



Standard Welding System contains the DHC2000 Welding Torch, #0, #0.5, #1, #2, #3 and Copper Cutting Tip, undercutter, overcutter with guide rail attachment, one set of check valves, a tip cleaner set, wrench, DVD, and instructional manual. P/N 12-16000

COBRA HENROB WELDING TIP-#0

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



HUNTSMAN FACE SHIELD - Dark green plastic window 8" x 11-1/2" snaps onto lightweight plastic adjust-able headband. Permits full peripheral vision during work. Protects against radiation - flip up visor when not in service.

VisorP/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.



SINGLE STAGE REGULATORS

Gas Used: Oxygen Delivery Pressure: 0-100 PSIG, 0-7 BarP/N 12-19300

Gas Used: Acetylene Delivery Pressure: 0-15 PSIG, 0-1 BarP/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



884

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

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

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.
 Dimensions: 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. P/N 12-02023

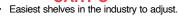


INNOVATIVE PARTS CART B™

This best-selling cart features an open design and 30 percent more shelf positions than most carts. It is ideal for major teardowns and repairs. The cart shelves can be easily adjusted to accommodate various parts. Highcarbon, heat-treated brackets support each shelf up to 125 pounds. Multiple parts carts can also be nested and easily stored, saving you space. There's no need to flip or reverse the shelf for nesting multiple units.

- U.S. Patent #7,314,413, 7,708,156 & other Patents Pending
 Dimensions: 41"W – 51"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: 3 adjustable shelves, 2 adjustable support arms, 2 bungee cords, 6 metal hooks
- 100 lbs...P/N 12-02024

INNOVATIVE PARTS CART C™



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: 6 adjustable shelves, 4 adjustable support arms, 2 bungee cords, 6 metal hooks
- 152 lbs. ..P/N 12-02025



AIRCRAFT SCALES – TEST EQUIPMENT



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		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)	



BARFIELD DIGITAL TURBINE TEMP TEST SET

The Barfield TT1200A is a Digital Turbine Temperature Test Set. It is microprocessor based, completely self-contained, battery powered unit housed in a high visibility ruggedized enclosure. It is designed with sufficient accuracies and range to be able to test digital and glass cockpit indicators with simple operation, direct reading, and multi-function versatility. The TT1200A is specifically designed to accomplish all requirements for testing the aircraft Chromel/Alumel (K type) turbine temperature measuring systems. The Test Set can measure resistances

down to 0.001 ohms, measure insulation up to 200M ohms, perform indicator run-outs with a resolution of 0.1°C or 1°C and a range of 1372°C.

P/N 11-13986

SCALES 4 PLANES



2,000 lb scale measures 11-3/4" x 15-1/4" and is made of cast aluminum. The electronic display has been recessed into the top to keep it out of harms way. Your tire will be positioned parallel to the display to allow the readout to be clearly seen on the outboard side of the tire, or wheel pants. The scale top is powder coated gray. The coating makes cleanup quite easy because most everything will wipe right off. The units are not water proof. They should never be washed by hose or high pressure, but gentle hand cleaning should be all that is needed.

Model No.	Description	Part No.	Price
AWS-6K-REM	A set of 3-2k with remote display	12-03801	
AWS-9K-REM	A set of 3-3k with remote display	12-03803	
AWS-15K-REM	A set of 3-5k with remote display 12" x 16"	12-03805	

AEROWEIGH AW-3-150LT LAPTOP / TABLET



Aeroweigh AW-3-150LT Wireless aircraft weighing equipment designed for large turbo props, large corporate jets and commercial airliners. Full wireless operations via laptop/tablet computer, USB antenna, 3ea wireless 50,000 lb top of jack aircraft scales, standard one inch jack mounting, calibrated with OEM NIST traceable calibration, ready to use as received. This is a large aircraft scale, it is intended for use from the Bombardier 600 series, Hawker 800 and up. This scale type is supplied to the OEM aircraft manufactures like Gulfstream, Bombardier, Dassault Falcon and regional airliner use. It is capable of aircraft up to the large single aisle jets.

Features: • Solid stainless steel top of jack load cells, each cell is capable of up to 50,000 lb and reads in a 5 lb count.

• 300ft range or more, operations and read out via the laptop computer which is included, capable of printing a full report, graphics are supported for enriched print outs including company logos.

P/N 12-05422

AEROWEIGH AW-3-30HH HANDHELD WIRELESS AIRCRAFT WEIGHING SYSTEM



Aeroweigh AW-3-30HH Wireless aircraft weighing equipment designed for turbo props and light jets up to 10,000 lbs per jack point, wireless operations via Hand Held Transceiver with built in antenna, 3 each wireless 10,000 lb top of jack aircraft scales, standard one inch jack mounting, calibrated with OEM NIST traceable calibration, ready to use as received. This is a helicopter, small turbo prop and light jet aircraft weighing system. One of the lightest aircraft scales available of any aircraft weighing kits on the market.

Features: • Solid stainless steel top of jack load cells, each cell is capable of up to 10,000 lb and reads in a 1 lb count • 300ft range or more, operations and read out via the hand held transceiver which is about the size of a large cell phone, this is a standard scale system with read out showing total weight with individual channel displays.

P/N 12-05423

AIRCRAFT SCALES M2400-3-10KP WIRELESS AIRCRAFT WEIGHING PLATFORM KIT



Aircraftscales M2400-3-10KP Wireless aircraft weighing platform kit is designed for most aircraft wheel weighing applications in the 10,000 lb per wheel and under category. Full wireless operations via 11.4 inch laptop computer (included) USB antenna, software pre loaded. 3 each wireless 10,000 lb aircraft platform scales, 30 inch long 7 degree aluminum ramps for easy pull up are included, calibrated with OEM NIST traceable calibration, ready to use as received. This is a small to medium aircraft platform weighing scale kit, widely used in small to large FBO operations, a must have for the small shop and 135 operators.

Features: • This kit features full function platform weighing capability for most small to medium aircraft that require to be weighed on platform aircraft weighing systems • Full wireless • No cables • Laptop power is capable of system operations for over 3 hours of use on a single charge. • Platform batteries are field replaceable and available anywhere in the

BEADBUSTER XB-455™

The BeadBuster XB-455 was designed to work on even the most difficult tires, which means it can make quick work of all general aviation light aircraft tires. An innovative new design requires no adjustment for different sized rims and no floor space required to set up. Precise, powerful control will ensure professional

results without damaging rims. Change your own tires whenever, and wherever you want. Weight 3 lbs. Dimensions $6\times6\times1.75$ in.

Features: • Designed in USA, made with care in Taiwan • Durable Steel Construction (AISI 1020 Cold Rolled) • Extra-strong Ram Foot is made from Hardened & Tempered 4130 Chrome-Moly Steel, with a Proof Load of >3,000 lbs • MIG Welded • Grd-5 & Grd-8 Hardware • Polyester Powder Coat Finish • Padded Clamp Arm (Will not scratch or dent rims).

Specifications: • Weight: 2.93 lbs • Size: 6" x 6" x 1-3/4" • Rim Lip Width (clamp opening): 1.70" • Max Rim Lip Thickness: 0.63" • Rim Diameter: Any • Rim Width: Any • Rim Material: Any • Max Ram Extension (throw): 1.438"P/N 12-04707

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 & with- out 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

BOGERT LARGE BEAD BREAKER 13M-TBB2



Break tire beads safely, with little effort! Originally built to work on dragster tires, this Tire Bead Breaker is capable of working on very small to very large tires. It's extremely adjustable! The Tire Bead Breaker is used to break the bead or bond between the tire and wheel with little effort and without doing damage to the expensive cast wheels.

P/N 12-03577

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

VALVE CORE REMOVAL TOOL



Boxell Aerospace 968RB Safe Core Valve Tool. Aircraft Tire Valve Core Removal Tool. Used for rapid and safe tire deflation. Tool threads on valve

stem. Releases and traps the valve core within the tool but exhausts the air through ports. Prevents Injury to Technician and FOD (stops the valve core from becoming a missile!) Air exhausts away from technician. Fits all standard aircraft tire schrader valves (equivelant to US Automotive valve stem). 100% Lifetime Warranty. Made In the USA.

P/N 12-03428

BERINGER SENSAIR TIRE PRESSURE **MONITORING SYSTEM**



The new Sensair system is connected to a mobile app on your smartphone thanks to pressure and temperature sensors slid over your Beringer rim. Sensors are normally switched off to save the battery (2 to 3 years lifetime) and are activated when the smartphone is detected within a 10ft/3m radius.

Sensair communicates data to the app with a single code per wheel, so there is no risk to measure the data of another tire in the hangar. Low pressure and temperature levels are set by the user on his smartphone, so he can receive a notification.

No need to ramp under your plane to check pressure anymore, thanks to Sensair, you can check your pressure before and during each flight!"

Description	Beringer P/N	Part No.	Price
5" Experimental Use Only	TP-005	06-04226	
6" Experimental Use Only	TP-006	06-04224	
5" Certified - For use with STC	TP-005	06-04225	
6" Certified - For use with STC	TP-006	06-04223	

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

ANALOG TIRE GAUGE



Tool Testing Lab's backlit digital gauge reads in PSI, InHg, Oz, Sqln, Inches or Feet, H2O, Kg, sqCm, Kpa, and Bar, with 1/2% tolerance and as fine as 0.1PSI resolution. It also holds peak readings, and features a built-in bleeder valve. Features: 300 PSI gauge, Accuracy 1% Full Scale 300 PSI Rated Hose Rubber Boot, Dual

oot Chick, Swivel Footing on Gauge. 0-160 PSI.

P/N 12-03345



TTL DIGITAL TIRE PRESSURE GAUGE

Ensure a safe flight by checking aircraft tire pressure with an accurate, certified Tool Testing Lab pressure gauge. The TTL Digital Aircraft Tire Gauge has a +/-0.25% FS accuracy for the most precise jobs. Gauge Size: 3" 1/4 NPT; Gauge Orientation: Inverted. Pressure Range: 0-300 PSI.

P/N 12-05314



TTL ANALOG TIRE PRESSURE GAUGE

TTL Inverted tire pressure gauge with included protective boot is a direct gauge replacement for TTL-300-ATG-I. Pressure Range: 0-300 PSI P/N 12-05315



TTL DIGITAL AIRCRAFT

TIRE MASTER KIT
Ensure a safe flight by checking aircraft tire pressure with an accurate, certified Tool Testing Lab pressure gauge. Along with certification, this Master Kit includes quick connect dual foot chuck, long and short straight chuck, and tire tread depth tool. Range (C): 300 PSI......P/N 12-05316



TTL ANALOG TIRE INFLATOR

This inflator provides accuracy and safety with an over pressure blow-off valve, 1% accurate gauge, bleeder valve, clip-on chuck, and inflation control ball valve Pressure Range: 0-300 PSI.

P/N 12-05317



TTL DIGITAL TIRE INFLATOR

This inflator provides accuracy and safety with an over-pressure blow-off valve, 0.25% accurate gauge, bleeder button, clip-on chuck, and inflation control trigger valve. Pressure Range: 0-300 PSI. P/N 12-05318



TTL ANALOG AIRCRAFT STRUT GAUGE

TTL analog aircraft strut gauge provides you with the needed accuracy when dealing with strut inflation. This kit includes the necessary strut fitting, soft seat valve, and air bleed valve to get the job done right. Pressure Range: 0-3000 PSI. P/N 12-05319



TIRE DOG

The Wireless Tire Pressure/Temperature Monitoring System for Trucks, Trailers, and Motor Homes. The tire pressure range is 0 to 180 psi. It will support 4 tires up to 22 tires. An adjustable swivel mounting bracket allows the monitor to be mounted on the dash or windshield. All items of the system are

battery operated with a life span of 12 to 24 Tire Dog Sensor.

P/N 05-04850

MEYER AIRCRAFT JACKS

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
Aero Commander	(2) A-6	(1) ATS	(2) AJL	(2) AT-4
Beech:	(2) A-6			
Model 50, King Air, Queen Air	(1) A-5			(1) AT-3
Beech : Bonanza, Debonair, Travelaire, Baron	(2) A-5	(1) ATS		
Mooney	(2) A-5	(1) ATS		
Piper: All except Navajo & Aerostar	(2) A-5	(1) ATS		
Piper Navajo & Aerostar	(2) A-6	(1) ATS		
Cessna: Cardinal RG	(2) A-6	(1) ATS		(2) AT-4
(,		() -		(2) ATC-8
Cessna: All high wings RGs exce pt	(2) A-6	(1) ATS	(2) AJL	(2) AT-4
Cardinal			(2, 7.02	(2) ATC-8
Cessna: All 300 & 400 Series	(2) A-5			(2) AT-28
	(=, / . 0			(3) ATC-4
Navion	(2) A-5	(1) ATS		(2) AT-28

Part No.	Description	Price
12-21405	A622 W/ AT62222 & JPR1	
12-21415	ATS Tail Stand	
12-02281	A427 Jack w/ AT42727 (27"/46")	
12-21435	AJL Leg	
12-21440	AT-1 Tube	
12-21445	AT-2 Tube	
12-21455	AT-3 Tube	
12-21460	AT-4 Tube	
12-21465	AT-28 Tube	
12-21470	ATC-4 Cap	
12-21475	ATC-8 Cap	
12-04981	AJL-ZB 8 Leg	

AJS	Height Ranges
A-5 w/AT-1*	22"/36"
A-5 w/AT-28	28"/42"
A-5 w/AT-3	34"/58"
A-6 w/AT-2*	34"/58"
A-6 w/AT-4	54"/78"
A-6 w/AJL	Legs+10"
ATC-4 Cap	+1 to 4"
ATC-8 Cap	+1 tp 8"
ATS Tailstand	30"/51"

(*) ATC Caps will not work on these tubes.

MEYER TRITASK AIRCRAFT JACK SETS



This has been designed to provide professinal technicians with the selection of equipment that best matches their own needs. It has a unique combination of aircraft jacks and accessories to lift the maximum number of different types of airplanes and helicopters weighing up to 8000 lbs. (3629kg) for the least amount of capital investment.

BASIC SET: • 2) A622 Jacks w/AT62222's and AT-JPR1's • 2) A634 Jacks w/AT63434's and AT-JPR1's • 1) AJL-ZB Extension Leg Set (8 legs) • 1) AT-EBZA Extension Bar Set • 2) AT62234 Inner Slide Tubes • 2) AT63448 Inner Slide Tubes • 1) ATS Aircraft Tailstand P/N 12-04777

DELUXE SET: • 1) A600JS-A TriTask Basic Aircraft Jack Set • 1) A622 Jack w/AT62222 and AT-JPR1 • 1) ALW-10 Leveling Washer Set • 1) AT-EBZB Extension Bar Set • 1) AT62234 Inner Slide Tube P/N 12-04778

A700 3-LEG SERIES AIRCRAFT JACKS



The heavier piston, turbo-prop and jet powered aircraft weighing up to 32000 lbs. (14517kg) are too valuable to consider using anything less than the A700 Series Aircraft Jacks from Meyer Hydraulics. For over 55 years, Meyer Hydraulics have been manufacturing aircraft jacks that continue to set the standard for safe, dependable lifting at affordable prices. This series of professional hydraulic lifting equipment handles airplanes and helicopters with the security and features one should demand in an aircraft jack.

	demand in an arefult jack.						
Meyer Model No.	Old No.	Capacity	Low	High	Lifting Range	Part No.	Price
A722B	_	16,000 lbs	22.5"	36.5"	14"	12-05106	
A722C	_	24,000 lbs	22.5"	36.5"	14"	12-05217	
A725B	A-2516	16,000 lbs	25.5"	42.5"	17"	12-02669	
A725C	-	24,000 lbs	25.5"	42.5"	17"	12-05218	
A728B	A-9	16,000 lbs	28.5"	48.5"	20"	12-02670	
A728C	_	24,000 lbs	28.5"	48.5"	20"	12-05219	
A734B	A-17	16,000 lbs	34.5"	60.5"	26"	12-02672	
A734C	A-1724	24,000 lbs	34.5"	60.5"	26"	12-02673	
A740C	_	24,000 lbs	40.5"	71.5"	31"	12-05066	
A755C	A-5524	24,000 lbs	55.5"	95.5"	40"	12-02677	
A760A		10,000 lbs	60.5"	100.5"	40"	12-05220	

MEYER AIRCRAFT JACK AND EXTENSION LEG

This Series basic design from Meyer Hydraulics has served as the general aviation industry standard for over 55 years. The A600 Series and its redecessors are being used by professional service technicians around the world providing confident lifting of airplanes and helicopters weighing up to 8000 lbs. (3629kg) with the security and features one should demand in an aircraft jack. Even after the additional TriTask features have been added, the A600 Series still continues to be surprisingly affordable.

- A634 Jack • 1 - AT-JPRI In the box: • 1 P/N 12-04765

MEYER A500 SERIES LOW AIRCRAFT JACKS

This Series has an ultra-low design that provides maximum single stage stroke while maintaining excellent stability throughout the lifting range. These Aircraft Jacks are ideal for low-slung airplanes and helicopters weighing up to 8000 lbs. (3629kg).

A514 - height range14"-24"	P/N 12-05216
A519 - height range 19"-34"	P/N 12-02290
A521- height range 21"-38"	

MEYER AIRCRAFT JACK REPLACEMENT SLIDE TUBES



Meyer Hydraulics Aircraft jack Replacement Inner Slide Tubes.

Description	Application	Lift (in)	Part No.	Price
Inner Slide Tube	A427, A62 (Tail Lifting)	28"-47"	12-05234	
Inner Slide Tube Extension	A419, A421, A519, A521	4"	12-05237	
Inner Slide Tube	A422	22"-36"	12-21440	
Inner Slide Tube	A422	28"-42"	12-21465	
Inner Slide Tube	A422	34"-48"	12-21455	
Inner Slide Tube	A427	27"-46"	12-05238	
Inner Slide Tube	A434	54"-78"	12-21445	
Inner Slide Tube	A434	54"-78"	12-21460	
Inner Slide Tube Top Conversion Adapter	A419, A421, A500	.875"	12-05239	
Inner Slide Tube	A622	22.312"-37.312"	12-05240	
Inner Slide Tube	A622	34.312"-49.312"	12-05241	
Inner Slide Tube	A627	27.312"-47.312"	12-05242	
Inner Slide Tube	A634	34.312"-59.312"	12-05243	
Inner Slide Tube	A634	48.312"-73.312"	12-05244	
Inner Slide Tube	ATS Aircraft Tailstand	51-72	12-05245	

MEYER HYDRAULICS EXTENSION BAR SETS

Ÿ.	Model No.	Kit Contains	Part No.	Price
	AT-EBZA	(2) AT-EB015s; (2) AT-EB035s (2) AT-EB055s; (2) AT-EB075s (2) AT-EB105s; (2) AT-EB125s (not for A755C or A760A)	12-04873	
ľ	AT-EBZB	(2) AT-EB025s; (2) AT-EB045s (2) AT-EB065s; (2) AT-EB085s 2) AT-EB095s; 2) AT-EB115s (not for A755C or A760A)	12-04874	

Model No.	Description	Part No.	Price
AT-EB015	1.5" (38mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05222	
AT-EB025	2.5" (64mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05223	
AT-EB035	3.5" (89mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05224	
AT-EB045	4.5" (114mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05225	
AT-EB055	5.5" (140mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05226	
AT-EB065	6.5" (165mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05227	
AT-EB075	7.5" (191mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05228	
AT-EB085	8.5" (216mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05229	
AT-EB095	9.5" (241mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05230	
AT-EB105	10.5" (267mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05231	
AT-EB115	11.5" (292mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05232	
AT-EB125	12.5" (318mm), for A600 & A700 Series Jacks (not for A755C or A760A)	12-05233	

MEYER JACK REPAIR KIT

Meyer Hydraulic Jack repair kit for A-5 Jacks (s/n 6417 plus), A-6 Jacks (s/n 5118 plus), A-60 Jacks (s/n 86 plus), A360A, A419, A421, A422, A427, A434. 1 bls (0.5Kg).

Model No.	Application	Part No.	Price
K-150A	A-5 (s/n 1 thru 6416), A-6 (s/n 1 thru 5117), A-10 (s/n 1 thru 51) A-11 (s/n 1 thru 88), A-16 (s/n 1 thru 85), A-60 (s/n 1 thru 85), C-1, C-4, DT-2, F-1, FL-1, JC, JC-ET, JML, LTJ (n/n 1 thru 1531), SSJ, U-11, U-12)	12-05246	
K-150B	A-5 (s/n 6417 plus), A-6 (s/n 5118 plus), A-60 (s/n 86 plus), A360A, A419, A421, A422, A427, A434, A514, A519, A521, A622, A627, A634, A760A, LTJ (s/n 1532 plus), MAC	12-03246	
K-175	A-9, A-10 (s/n 52 plus), A-11 (s/n 99 plus), A-12, A-13, A-17, A322B, A325B, A328B, A330B, A334B, A342B, A722B, A725B, A728B, A734B, C-2, F-4, RC-2, SRC, TJC, TTJ	12-05248	
K-200	A-14, A-15, A334C, A340C, A342C, A355C, A728C, A734C, A740C, A755C, C-6A, P-12, TTJ3	12-05249	
K-ETJ-2S	ETJ (s/n 2000 plus), EVJ	12-05250	

MEYER JACKING POINT RECEIVERS

Made of solid steel and powder-coated with a long-lasting yellow finish for easy spotting, these JPR Receivers have been designed to be put into the top of an A600 or A700 Series Aircraft Jack's Inner Slide Tube, an AT-EBnnn Extension Bar or the AT500-CA Conversion Adapter for the

A500 Series. The AT-JPR1 is a 1.5" x .187" (38x5mm) pad with a .875" (22mm) round Jacking Point receiving socket. The AT-JPR2 is a little larger with a 1.75" x .375" (44x10mm) pad with a 1.25" (32mm) round receiving socket. Both have a 1" x 1" (25.25mm) round stem.

Model No.	Description	Part No.	Price
AT-JPR1	Meyer Jacking Point Receiver #1	12-05235	
AT-JPR2	Meyer Jacking Point Receiver #2	12-05236	

IRCRAFT 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 college. Oversign chicagons ers, jack handle holder and positive locking collars. Oversize shipping charges apply.



AIRCRAFT TAIL STAND J-550 Aircraft Tail Stand 19"-35", Easy to use tail stand with "U" shaped locking collar to attach to aircraft. Use weight available in shop (i.e. sand bags) making the stand itself more manageable.

P/N 12-99130

JACK POINTS

Aircraft Jacks	Image	Part No.	Price
Cessna Jack Points Spring Gear Type		12-01374	
Mooney Jack Points (Sold Individually)		12-01375	 each



AIRCRAFT JACKING SOLUTIONS BELLY PAD SYSTEM NOSE GEAR

This simple, safe, and efficient design allows for quick servicing or repair of aircraft wheel assemblies and main gear security.

The cushioned Belly Pad lifting option allows aircraft to be lifted from below the gearbox

bulkheads. Lifting the aircraft from below allows the mechanic to inspect the security of the upper gear at the gearbox and to investigate any play or movement.

Compatible: • All known Nose Wheel Cessna, Sling & others • Except C150. P/N 12-05612



AIRCRAFT JACKING SOLUTIONS FLAT GEAR SYSTEM NOSE GEAR

This simple, safe, and efficient design allows for quick servicing or repair of aircraft wheel assemblies and main gear security.

The new design allows nose gear aircraft to be raised by the landing gear with lift pads placed at the upper portion of the gear lags. The latter allows both wheels to be lifted together creating a stable much safer working environment. Built-in safety stops prevent unplanned lowering of the jack.

Compatible: • All known Nose Wheel

Cessna, Sling & others • Except C150. P/N 12-05610

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
Complete Aero Jack System - Service both flat and round gear from a handy toolbox.	12-00254	
Flat Gear Aero Jack Kit - 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	
Round Gear Aero Jack Kit - Cessna C-172RG, 177RG, 182RG, 210, T210, P210, and similar landing gear.	12-00682	
Expandable Aero Jack System - 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	



TRIBAL JACK

Aid aircraft maintenance, such as servicing brakes, working on bearings, or changing tires.

Maximum load of 2,500 pounds and can be used on Piper aircraft, Musketeer, Mooney, and many more aircraft with near-vertical landing gear. Lower clearance lifting pad which allows jack owners to begin lifting from a 2 1/2" starting position and up to 12". It can be used on main gear, nose gear and the tail wheel. Made in USA.

.....P/N 12-00838

AIRCRAFT JACKING SOLUTIONS FLAT **GEAR SYSTEM TAILWHEEL**



This simple, safe, and efficient design allows for quick servicing or repair of aircraft wheel assemblies and main gear security.

The new design allows tailwheel aircraft to be raised by the landing gear with lift pads placed at the upper portion of the gear lags. The latter allows both wheels to be lifted together creating a stable much safer working environment. Built-in safety stops prevent unplanned lowering of the jack.

Compatible: • All Cessna Tail Wheel Aircraft

• C120 through C185

P/N 12-05611

AIRCRAFT JACKING SOLUTIONS BELLY **PAD SYSTEM TAILWHEEL**



This simple, safe, and efficient design allows for quick servicing or repair of aircraft wheel

assemblies and main gear security.

The cushioned Belly Pad lifting option allows aircraft to be lifted from below the gearbox bulkheads. Lifting the aircraft from below allows the mechanic to inspect the security of the upper gear at the gearbox and to

investigate any play or movement.

Compatible: • All Cessna Tail Wheel Aircraft • C120 through C185 • Works on both flat and round landing gear Aircraft.

RCRAFT JACKS

BOGERT WING JACK PADS



Jack Pads attach to wing jack points. Follow aircraft service manual instructions for jacking. Cessna 210, 177RG

P/N 12-03533

Cessna 172RG, 182RG P/N 12-03532

Beech Musketeer, Sundowner P/N 12-03535

Mooney M20 Series

P/N 12-03534

BOGERT 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

BOGERT 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



AUTO JACK ADAPTER

P/N 05-08297



BOGERT AVIATION CIRRUS SR20 / SR22 JACK PAD

This jack pad is designed to thread into the wing jack points for use with wing jacks. Each pad can be used with an aviation wing jack that is made to accept a jack point.

P/N 12-05118



BOGERT CESSNA 337 JACK PAD

This jack pad is designed to thread into the wing jack points for use with wing jacks. Each pad can be used with an aviation wing jack that is made to accept a jack point.



BOGERT BEECHCRAFT B35/58 JACK PAD COMBO

Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-B35/B58 Jack Pad for all Beech Bonanza and Beech Baron aircraft makes maintenance on wheels, brakes, tires and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack adapter and axle pin with any 4-6 ton hydraulic bottle jack to raise main

gear and nose gear to fix a flat or do normal preventative maintenance. The system is small and light enough to carry on board so you have the tools you need. **Features**: • Works for Main and Nose Gear • Saves time and money · Adds mission capability · This jack adapter and pin can be used to pick up a flat tire to tire changing height • Frees up full service and wing jacks for other workP/N 12-05120

BOGERT BEECHCRAFT B35/58 JACK PAD KIT WITH JACK



Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-B35/B58 Jack Pad for all Beech Bonanza and Beech Baron aircraft makes maintenance on wheels, brakes, tires and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack adapter, axle pin and included Safe Jack 6 ton hydraulic bottle jack to raise

main gear and nose gear to fix a flat or do normal preventative maintenance. The system is small and light enough to carry on board so you have the tools you need......P/N 12-05121

BOGERT CESSNA 340 / 401/ 402 / 4011 / 414 JACK KIT

Forget dragging out a full set of wing jacks to do routine maintenance. The 30M-402-k Jack Kit for all Cessna 340, 401, 402, 411, 414 and 421 aircraft makes maintenance on tires, brakes, and wheel bearings simple and fast. You can do the work just about anywhere. Use the jack pad and hydraulic jack to raise main gear to fix a flat or do normal preventative maintenance.

The system is small and light enough to carry on board so you have the tools you need. **Features:** • Works for Main Gear • Saves time and money • Adds mission capability • This jack pad and hydraulic jack can be used to pick up a flat tire to tire changing height • Frees up full service and wing jacks for other work • Frees up hanger space.

P/N 12-05129

BOGERT VANS RV JACK PAD



You asked for them and here they are. This jack pad is designed to thread into the wing tie down holes for use with wing jacks. Pad can be used with an aviation wing jack that is made to accept a jack point or you can

use the supplied adapter on homemade wing jack that are popular with home built owners. Pad is sold individually with a jack adapter.

Specifications: • Fits RV aircraft that have a threaded tie down rings with 3/8-16 threads • Fits RV aircraft that have a threaded tie down rings with 3/8-16 threads • Sold as singles • Made in USA • Pad has 3/8-16 internal threads • Sold as singles • Made in USA
• Pad has 3/8-16 internal threads and grade 10 set screw threads • Pad
is 2 inches in diameter • Rubber padded • ¾" Ball jack point • Jack ram
adapter fits jack rams up to 1.25 inch diameter • Jack ram adapter is
machined steel. Sold as singles • Made in USA • Pad has 3/8-16 internal threads and grade 10 set screw threads • Pad is 2 inches in diameter Rubber padded • ¾" Ball jack point • Jack ram adapter fits jack rams up to 1.25 inch diameter · Jack ram adapter is machined steel.

RCRAFT JACKS

BROWNELL AVIATION JACKS



For over forty years Brownell has been the leading name in boat storage equipment throughout North America and the world. The same commitment comes in our new line of aviation products. Brownell slightly modified our jack stands and dollies to fit the needs of aviation professionals and

enthusiasts in order to help make the work place safer and more efficient. All of the products are made in America using skilled American labor and American steel.

- · Precision acme threads for easy, smooth adjustment
- Very stable work or storage platform
- Stays in place with no bleeding, etc.
- Small footprint of base and top pad allow for easy access
 Stands stack neatly when not in use to free up valuable space
 TPE surface resists slipping and scratching
 SWL 20,000lbs/9,100kgs

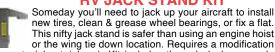
Description	Height Mins (in/cm)	Weight (lb/kg)	Part No.	Price
AS3 w/top	25-38 / 64-97	97 / 15.0	12-03299	
AS2 w/top	29-46 / 74-117	37 / 16.5	12-03301	
AS1 w/top	33-50 / 84-127	38 / 17.0	12-03302	
AS0 w/top	41-58 / 104-147	46 / 21.0	12-03303	
AS0X w/top	54-72 / 137-183	46 / 22.5	12-03304	
AS0XX w/top	67-84 / 170-213	50 / 43.0	12-03305	



BROWNELL AVIATION TAIL STAND

- · Precision acme threads for easy, smooth adjustment
- Very stable work or storage platform
- Stays in place with no bleeding, etc.
 Small footprint of base and top pad allow for easy access
- Stands stack neatly when not in use to free up valuable space
- TPE surface resists slipping and scratching
- SWL 20,000lbs/9,100kgs
- 30-52"/76-131cm range · Universal connection
- · Base plate
- · Accommodates ballast .. P/N 12-03306

RV JACK STAND KIT



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

RV 8 TRAVEL JACK



The RV 8 Travel Jack was designed and manufactured by RV-8 builder / pilot Steve Jackson. All steel construction, weighs less than 3 pounds. Jack mast easily removes from base plate for compact storage. Uses 3/4" wrench to operate (wrench not included). Tested to 1350 pounds. Has securing arm that positions between the gear leg & brake to stabilize the jack - works on both left and right gear leg with a simple adjustment. Base measures 3-1/2" X 8"; mast stands

10" tall. Designed for RV-8 flat spring gear legs (only -- will not work on the other RVs with round gear legs).

.....P/N 12-03170



QUALITY JACK POINTS

Quality Jack Points. (Very high quality jack points for most aircraft wing installations and jacks). These very small, lightweight (less than two oz.) aircraft grade aluminum Jack Points can make jacking your aircraft a simple and

safe task. These Jack Points incorporate a grade eight 3/8"X 16 plated stud that fits the wing thread that can't fail causing damage. The heattreated, aircraft grade aluminum body, is de-burred, and tumbled to eliminate sharp edges and includes an attached nylon spacer to protect the wing skins painted surfaces. These parts are small and light weight so you may want to carry them in your plane should you find the need for them away from home. Sold as a pair......P/N 05-12379

BEECHCRAFT B90 JACK PAD



The pad is available without the remote bottle jack. The 30M-B90 Jack Pad is bottle jack. The SUNN-BBU Jack Fau is great for raising one wheel for a tire change, repacking wheel bearings or servicing the brakes. When used with a long stroke jack, the jack pad may be used to change a flat tire. Small and light enough to carry on board, the jack pad adds mission capability when operating from airports that do not have full service or wing jacks large enough to lift these aircraft

Features:

- Small, Portable and light weight compared to wing jacks
- Should be used with Bogert hydraulic, 12", 15 ton long stroke bottle jack
 The jack pad can be used with 6 ton, 1¼" ram or larger bottle jacks
- Can be used with 3 ton or larger floor jacks.

Made III tile een t	
Jack Pad Only	P/N 12-03165
Jack, Pad, and Pump Kit	



ALPHA AVIATION 3 TON **PRO-LINE JACK**

The ULTIMATE in versatile general aviation aviation jacks. When the need is for a versatile jack that can accommodate the needs of a busy FBO, the Model #368W is the choice. The Model #368W combines all the versatility of Model #838W with the necessary fittings to accommodate high wing Cessna aircraft such as 172RG, 177RG, 210. (Models 182RG and 337, see 868HLW), but in a 3 Ton version. Shipped with adapters, the unique design allows the Model #368W to easily convert from a 26" low wing jack through the 32" and 38" levels to a double-braced 62" or 68" high wing jack, avoiding the high cost of

having to purchase model specific jacks.

Note: NOT RECOMMENDED FOR: Beech Model 99, Beech 1900, Citation Series, Cheyenne I/II/III/ IV, Conquest King Air, Navajo, Pilatus, Queenaire, T28 due to untested side-load situations.

P/N 05-22912



LANDING GEAR

SAFETY STAND
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".

TO DUOD WITH AUJUSTADIO HOIGHT OF TH	
9" Stand	P/N 12-02015
12" Stand	
18" Stand	P/N 12-00256



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 . Made in the USA

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



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:P/N 12-01725



WHEEL KIT FOR HYDRAULIC AIRCRAFT JACKS

Add Wheels to our Model #324, #326 or #332 The base that comes standard with all of our aircraft jack models is pre-drilled to easily allow for the addition of a Wheel Kit. This Kit Includes: 1 Left Bracket, 1 Right Bracket, 2 Wheels, Hardware Packet, Installation Instructions

P/N 12-02032

ALPHA AVIATION PORTABLE TAILWEIGHT POST 535

The unique design allows the secure anchoring of compression or torsion loads without the need of numerous sand bags and anchor chains. A safer and much more professional approach to securing the tail of an aircraft undergoing maintenance. Shipped knock down, the portable tail weight/tail post is easily assembled and weighted using solid concrete blocks obtained locally.

P/N 12-05486

EIGHT TON HYDRAULIC AIRCRAFT JACKS



MODEL #838W 8 TON UNIVERSAL JACK

26"-43", 32"-49", 38"-55" 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 •

Double Action 8 Ton (16,000lb) Hydraulic Cylinder 2·
Highly Versatille- Shipped With Adapterd 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 lbsP/N 12-01726

The Model 838HLW combines the strength and versatility of our Model 838W jack with the ability to provide a full 6" of additional ram travel. Ram travel that translates into additional ground clearance, working room and reduced set up timeP/N 12-03328



MODEL #868W 8 TON UNIVERSAL JACK

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, 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 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 • Steble These Load 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

NOT RECOMMENDED FOR Beech Model 99, Beech 1900, Citation Series, Chevenne I/II/III/IV, Conquest, King Air, Navajo, Pilatus,

ALPHA AVIATION JACK SEAL KITS



3 Ton Jack Seal Kit for Alpha Aviation Aircraft Jack Models #324W (324) /#326W (326) / #332W (332) with 1-1/4" diameter ram only.

P/N 05-22907

8 Ton Jack Seal Kit for Alpha Aviation Aircraft Jack Models #838W, 868W, 838HLW or 868HLW with 1-1/4" diameter ram only. P/N 05-22908

TAILWEIGHT EXTENSION FOR TAILWEIGHT POST



Adds on an additional 12 inches to the Tailweight Post model 375. For higher wing aircraft......P/N 12-02033



Alpha Aviation Tailweight Extension 24 Inch for Jacks. P/N 05-22910



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 facemask 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 1 (1/2 mask) 110V	P/N 12-15850
Hobbyair 1 (1/2 mask) 220V	P/N 12-15860
Buddy System Hobbyair (110V)	P/N 12-15870
Hobbyair I (Full mask) 110V	P/N 12-15851
Hobbyair I (Full Mask) 220V	
Hobbyair II	P/N 09-00633
Hobbyair Buddy System	
(2 full face Masks 110V)	P/N 12-05094
Hobbyair Cartridge Filter	P/N 09-01015



HOBBYAIRE BUDDY SYSTEM AIR RESPIRATOR

Hobbyair Buddy System comes standard with an air pump, 2-40' hoses and a half facemask (HF01)

for one person. Locate the intake air pump in a fresh air location and breathe HEPA filtered clean fresh air in most contaminated breathing

protect your lens from overspray and lengthen the life of your face-mask.......P/N 12-02366

3M™ PARTICULATE RESPIRATORS



09-01496 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
8210 Standard dust mask	09-01496	
Vented dusk mask	09-01497	



3M HALF FACE DISPOSABLE RESPIRATOR ASSEMBLY

The 3M™ 5000 Series Half Facepiece Disposable Respirator Assembly with Organic Vapor and P95 Particulate Filters, Respiratory Protection (51P71,

52P71, 53P71) helps provide protection against certain airborne contaminants. This respirator is NIOSH approved for respiratory protection against certain organic vapors and particulates up to ten times the permissible exposure limit (PEL). Half Facepiece respirator may be used in a variety of workplace applications, including spray painting, pesticides, agriculture, construction, and transportation. This disposable respirator assembly offers greater convenience by reducing the need for long-term maintenance. This half facepiece respirator is an ideal choice for intermittent use.P/N 09-05716



UVEX BIONIC FACE SHIELD

- · Honeywell UvexTM BionicTM Face Shields
- Shell offers built-in chin protection and extended topof-head coverage
- Highly adjustable headgear tilts visor nearer or farther from face depending on preference and application
- Comfortable cell foam on back of headgear
- Breathable, removable, washable headband
- Comfortably worn with most goggles and respirators Testing and Approvals:

Passes ANSI Z87+ and CSA Z94.3 Standards P/N 12-05261

CITATION 4 HVLP SPRAYER/RESPIRATOR



Allows its' user to achieve 'show plane' quality results to a level never before possible with a turbine powered 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 power-

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

CITATION 3 STAGE HVLP PAINT SPRAYER AND RESPIRATOR WITH BOTTOM FEED GUN



Standard One man System Includes: Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, HVLP respirator, Half facemask & belt, HVLP
Apollo Paint Spray Gun with One Cup
- Bottom Feed, Complete System and
Spray Gun Manual, Introductory 'How
to" Spray Manual, 3 Stage Sprayer
Specs: 110-120V VAC, 50/60HZ,
Amps: 11.5, PSI: 5.5 One Man
Respirator: 110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask
Two Man Respirator: 110-120V VAC, 50/60HZ, Amps: 7, Cfm: 7.5 @
Facemask
P(N) 12-02372

Facemask......P/N 12-02372

CITATION 3 DUAL HVLP PAINT SPRAYER AND RESPIRATOR WITH GRAVITY GUN



Standard One man System Includes: Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, Gravity HVLP Apollo Paint Spray
Gun with One Cup - Gravity Feed,
Complete System and Spray Gun
Manual, Introductory 'How to" Spray
Manual 3 Stage Sprayer Specs:
110-120V VAC, 50/60HZ, Amps: 11.5, PSI: 5.5 One Man Respirator:

110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask **Two Man Respirator:** 110-120V VAC, 50/60HZ, Amps: 7, Cfm: 7.5 @ Facemask......P/N 12-02373

CITATION 4 STAGE HVLP PAINT SPRAYER AND RESPIRATOR WITH BOTTOM FEED GUN



Standard One man System Includes: Citation Dual HVLP Pump, Two 40' hoses, one sprayer & one respirator, Half facemask & belt, Bottom Feed HVLP Paint Spray, Gun with Quart Cup, Complete System and Spray Gun Manual, Introductory 'How to" Spray Manual 3 Stage Sprayer Specs: 110-120V VAC, 50/60HZ, Amps: 11.5, PSI:

5.5 One Man Respirator: 110-120V VAC, 50/60 HZ, Amps: 1.6, Cfm: 7 @ Facemask Two Man Respirator: 110-120V VAC, 50/60HZ, Amps: 7,

CITATION 4 STAGE SPRAYER AND RESPIRATOR WITH GRAVITY GUN



The Citation 4 combined HVLP paint sprayer and respirator system includes a paint sprayer and second separate air pump for cool fresh breathing air. Includes four stage turbine power and spray gun of your choice. Great for most finishes.

3M™ SAFETY GOGGLE BX™

BX protective eyewear are fully adjustable with three lens angles and adjustable nose bridge and temple length. Silver/Black frames.

Features: • Soft adjustable nose bridge

• Three lens angles for cozy fit • Integrated sideshields • Protect your eyes from impact and block 99.9% UV rays • Polycarbonate anti-fog lens • Meets the requirements of CSA Z94.3-2007 and the High Impact Requirements of ANSI Z87.1-2003P/N 09-02154

VIRTUA PROTECTIVE EYEWEAR AP



The Virtua protective eyewear line merges outstanding unisex style, protection and affordability, all while offering wearers an open, unobstructed viewing range and impact-resistant, in the control of 3-piece polycarbonate construction. Designed for

indoor or outdoor use.

- Clear, anti-fog lens
- Clear frame
- Weighs less than one ounce
- Polycarbonate lens absorbs 99.9% UV

Clear Anti-Fog Lens	P/N	09-03053
Gray Hard Coat Lens		
Light Blue Hard Coat Lens		
Clear Hard Coat Lens		
Clear Hard Coat Lens	P/N	09-03059



OPTICOR SAFETY GLASSES

Meets ANSI Z87.1+ (High Impact) and CSA Z94.3 Standards. Sizes: One Size Fits Most Frameless. Black Nylon Temples. Polycarbonate Lens. CASC (Cordova Anti-Scratch Coating). Thermo-Plastic Temples and Nose Piece. ClearP/N 14-02170



SAFETY FACE SHIELD REPLACEMENT

Provides protection for the face and neck against chemical splash and flying particles. Replace. Window, Clear P/N 90030

3M™ SECUREFIT™ PROTECTIVE CLEAR EYEWEAR



These glasses come with important safety features for overall eye protection, including impact resistant polycarbonate lenses that absorb 99.9% UVA and UVB rays up to 380 nm. The glasses also meet the requirements of CSA Z94.3-2007 and ANSI Z87.1-2010. This protective eyewear weighs less than one ounce for lightweight comfort.

Color	Part No.	Price
Clear	09-04759	
Gray	09-04760	
Amber	09-04761	
AntiScratch Gray	09-04763	
Anti-Fog Clear	09-04764	
Anti-Fog Gray	09-04765	



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 repellant 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

Scar	ab Lite S	Sand Blast Hoo	od	P/N	12-01666
Scar	ab Sand	Blast Hood		P/N	12-01665
comp	olies With	OSHA regulat	ions for indu	striai nea	a protection.

Lens for Scarab Blast HoodP/N 12-01667 Screen for Scarab Blast Hood......P/N 12-01668

3M ™ PELTOR™ PERSONAL **HEARING PROTECTORS**



OPTIME 105

Over-the-head dual cup. NRR 30. Can be used for noise levels up to 105 dB. Color: Black and Red P/N 12-00699



OPTIME 105 HI-VIZ

NRR 30. Can be used for noise levels up to 105 dB. Bright Hi-Viz Yellow great for recognition of workers. P/N 12-02568



OPTIME 101 - Over-the-head Hp. NRR 27. Can be used for noise levels up to 101 dB. Color: Green. P/N 12-16110



OPTIME 98 - Over-the-head Hp. NRR 25. Can be used for noise levels up to 98 dB. Color: Yellow and Black. P/N 12-02569



OPTIME 95 - Folding hearing protector. NRR 21. Can be used for noise levels up to 95 dB. Folding - Slim design. Color: Beige and Black......P/N 12-02570

3M™ E-A-R™ EARPLUGS



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 pressureP/N 9134 with CordP/N 09-02148



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 nonirritating, non flammable, and moisture-resistant

P/N 09-02149 with CordP/N 09-02150



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 with CordP/N 09-02152



3M™ PISTONZ™ EARPLUGS

No need to roll down. Biaxially-stiff stem for easy insertion, yet designed to flex sideways if impacted. Tips look like metal, yet provides ultra-soft feel for all day wear.

without Cord P/N 12-02571 with CordP/N 12-02572



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



DERMA-LITE POWDERED NITRILE DISPOSABLE GLOVES

Powdered nitrile. Thickness: 5 mil. Extraordinary strength and puncture resistance. Non-latex. Lightly textured.

Color	Part No.	Price
Small	01-01537	
Medium	01-01538	
X-Large	01-01541	

KEVLAR™ HEAT SLEEVE

14" length of 100% Kevlar. Improved comfort and protection against cuts and abrasions. Heat resistant. May be worn with gloves. Washable and reversible.

P/N 01-01548



3M™ HARD HAT

Protective White hard hat with comfortable 4-point ratchet suspension and standard brow pad. Meets requirements of ANSI/ISEA Z89.1-2014 Type 1, Class G and E. 4-point ratchet suspension allows wearer to customize height and fit. Suspension sits lower on

head to reduce pressure and increase security. Short brim enhances better upward visibility. Slots allow for attachment of safety accessories. Replaceable brow pad enhances comfort and extends life. Meets requirements of ANSI/ISEA Z89.1-2014 Type 1, Class G and E. ANSI/ ISEA compliant when worn in the forward and reverse donning posi-P/N 09-04766



3M™ DISPOSABLE PROTECTIVE COVERALL 4530 The 3M™ Protective Coverall 4530 is disposable

safety work wear made of lightweight, breathable polypropylene with flame resistance. Designed to be worn over primary FR garments, it helps provide

protection against dusts and light liquid splashes. Features: Breathable material to help reduce heat buildup and promote comfortable wear. Knit cuffs with elasticized waist and ankles for increased comfort and freedom of movement. Three panel hood design for compatibility with complementary PPE. Two-way zipper with sealable storm flap. Reinforced gusset for increased durability. Flame resistant treatment offering secondary protection against heat and flames Anti-static coating on both sides.

L	P/N 12-02663	XL	P/N 12-02664
2XL	P/N 12-02665	3XL	P/N 12-02666
4XL	P/N 12-02667		



3M™ DISPOSABLE PROTECTIVE **COVERALL 4520**

The 3M disposable protective coverall 4520 key features include: Breathable material (SMMMS) to help reduce heat stress and comfortable wear. Elasticated waist, ankles, and wrists for convenience and freedom of movement. Three panel hood design for compatibility

with complimentary PPE. Two-way zipper with storm flap for convenience and to help provide additional protection. Anti-static coating on both sides. Protect against light liquid splashes and hazardous dusts.

.....P/N 12-02694



3M™ DISPOSABLE PROTECTIVE **COVERALL 4540**

The 3M™ Protective Coverall 4540 is disposable safety work wear made of a high quality laminated material with a breathable back panel for improved air circulation.Protection against light liquid splashes and hazardous dusts. Features: Constructed of a

low-linting, non-woven, laminated microporous material with anti-static coating on both sides, Knit cuffs with elasticized waist and ankles for increased comfort and freedom of movement Three panel hood design for compatibility with complementary PPE Two-way zipper with sealable storm flap Reinforced gusset adds extra durability Breathable back panel to help improve air ventilation and reduce heat buildup.

PARTICULATE RESPIRATOR



The lightweight, disposable N95 particulate dust respirator is designed to help provide quality, reliable worker respiratory protection. 3M uses a variety of innovative features to help you meet your respiratory protection and comfort needs. The respirator incorporates 3M's proprietary technology with advanced electrostatically charged microfiber filter media.

P/N 09-04753

3M™ VFLEX™ PARTICULATE RESPIRATOR



This disposable N95 particulate respirator is designed to help provide quality, reliable worker respiratory protection for certain non-oil based particles. It has a unique folded design with 3M proprietary filter media and V-shaped pleats that expand to help make breath-

ing easier. In addition, the V-shaped pleats flex with mouth movement for easier talking. The respirator features uniquely designed tabs for positioning the respirator on the face and embossed front panel to help the respirator retain its shape.....P/N 09-04754



3M HALF FACEPIECE REUSABLE RESPIRATOR

The 3M™ Half Facepiece Reusable Respirator 6000 Series helps provide protection against particulates and a wide variety of gases and vapors when used

with approved cartridges and filters. When properly fitted and used with approved 3M™ cartridges and filters, this respirator helps provide protection at concentrations up to 10 times the Permissible Exposure Limit (PEL). The swept back design of the cartridges helps improve balance and visibility. Remarkably comfortable, soft, lightweight facepiece has eEasy-to-adjust head straps allow for a customized fit to the user. Replaceable cartridges help reduce waste and costs over time. P/N 09-05764

PARTICULATE RESPIRATOR



95% filter efficiency level effective against particulate aerosols free of oil; time use restrictions may apply. Maintenance-free construction. Adjust-able nose bridge with foam strip to reduce the potential for eyewear to fog. Latex-free stapled fixed head strap. 20 masks per box

.....P/N 01-01558 Box of 2 Box of 20P/N 01-01556

VALVED PARTICULATE RESPIRATOR



95% filter efficiency level effective against particulate aerosols free of oil; time use restrictions may apply. Maintenance-free construction. Exhala-

tion valve for easy breathing. Adjustable nose bridge with foam strip to reduce the potential for eyewear to fog. Latex-free stapled fixed head strap. 10 masks per box.

Box of 1P/N 01-01559 Box of 10P/N 01-01557



3M RUGGED COMFORT HALF **REUSABLE RESPIRATOR**

The 3M™ Rugged Comfort 6500 Series Half Facepiece Reusable Respirator helps provide respiratory protection in harsh, dirty environments against airborne contaminants when used with approved 3M™

cartridges and filters. When properly fitted and used with approved SM™ cartridges and filters, this respirator helps provide respiratory protection at concentrations up to 10 times the Permissible Exposure Limit (PEL).

Color	Part No.	Price
Small	09-04755	
Medium	09-04756	
Large	09-04757	

3M™ E-A-R™ PUSH-INS™ CORDED EARPLUGS 3M™ E-A-R™ Push-Ins™ Corded Earplugs fea-



ture soft and flexible E-A-Rform™ Foam that inserts quickly and easily into the ears for comfortable noise reduction. The push-to-fit design with a flexible stem helps keep the soft foam

tip clean, even when hands are dirty, since there is no need to roll the foam before fitting. Cord allows earplugs to be stored conveniently when earplugs are worn intermittently. Earplugs are packaged in a poly bag to keep them clean prior to use. Recommended applications include assembly and mechanical, chipping, chiseling, cleaning, drilling, furnace operations, grinding, heavy equipment operations, machining, metal repair, painting, pouring/casting, power fastening, riveting, sanding, sawing and weldingP/N 09-04758