

Now You Can Make Your Own High Quality Photo-Etched Parts

A Micro-Mark Exclusive! 2 Years in Development!



Model not included

Nothing adds the WOW factor to your models and miniatures like precision-crafted photo-etched metal details...and now, with the revolutionary Pro-Etch System, you can make them right at home.

This is a true photo-resist metal etching system that employs advanced technologies and materials previously available only to industrial users. It uses your computer, an ink jet printer, and materials included in the system to achieve incredibly fine results. Virtually any small item that can be made from a flat piece of metal can be created with the Pro-Etch System in a fraction of the time it would take using other tools and methods (if it could be done at all). You can even create sophisticated 3-dimensional objects with a combination of careful design and folding of the flat photo-etched pieces. Make your own highly detailed parts for models, miniatures and instruments, jewelry, holiday decorations, engraved nameplates, craft items and hundreds of other items. In almost no time you'll be making precision metal parts with fine-line details you never thought possible.

Let your imagination run wild...the possibilities are unlimited!

Note: Maximum overall size of etched sheet: 3" square x .010" thick.

The Pro-Etch System includes all the materials you need to set up your own photo-etching operation:

- Specially developed, high resolution, ink jet film (two, 8-1/2" x 11")
- Photo-resist material (one, 19" x 12")
- Brass and stainless steel sheet metal (one each, 6" x 12")
- Photo-resist laminating machine and carrier sheets
- Exposure frame and clamps
- Sodium Hydroxide* developing/stripping solution (16 oz.)
- Plastic developing/stripping trays
- Etching tank with circulating pump
- Ferric Chloride* etchant solution (16 oz.)
- Metal-prep pad, plastic tweezer, measuring cup, apron, goggles and gloves
- How-To manual with easy-to-understand instructions, illustrations and photos to guide you through each step of the process.

*Note: System contains chemicals that are highly caustic. Careful handling of these chemicals and good ventilation are prerequisites for the use of this system. Not for use with aluminum.

The Pro-Etch System will not only make intricate metalworking easy, it will also pay for itself with just a few uses.

#83123 Pro-Etch System (ships by ground to 48 contiguous U.S. only) ... List \$163.75 ... Our Price **\$129.95**

#83123F Pro-Etch System - Export Version ... List \$158.30 ... Our Price **\$125.95**

To make the Pro-Etch System suitable for international shipping, two of the chemicals required for use of the system (marked with * above) have been removed from the Export Version. To use the Pro-Etch System, you will need to purchase these chemicals locally.

Refills and Accessories

- #83126** Ferric Chloride Etchant, 16 liquid oz. **\$6.75**
- #83127** Sodium Hydroxide Developer/Stripper, 16 liquid oz. **\$6.25**
(Above items ship by ground to 48 contiguous U.S. only)
- #83128** Ink Jet Film, 8-1/2" x 11" (pkg. of 6) **\$15.75**
- #83129** Laminator Carrier Sheets, 6" x 12" (pkg. of 2) **\$6.25**
- #83130** Photo-Resist, 12" x 19" (pkg. of 2) **\$9.40**
- #83125** Stainless Steel Sheets, 6" x 12" x .005" thick (pkg. of 2) **\$12.55**
- #83511** Stainless Steel Sheets, 6" x 12" x .010" thick (pkg. of 2) **\$16.75**
- #83124** Brass Sheets, 6" x 12" x .005" thick (pkg. of 2) **\$9.40**
- #83134** Metal Prep Pad, 3200 grit (pkg. of 6) **\$8.95**

Flitz Polishes and Protects Any Metal

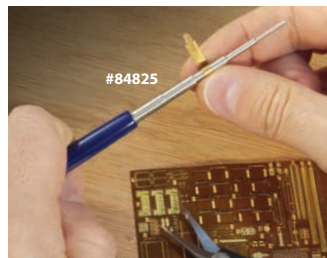


Flitz is the universal polish that removes rust, oxidation, tarnish, heat discoloration and water stains, and leaves a protective coating that resists tarnish for up to six months. It's the best you can buy.

#60436 Flitz (50 gram tube) **\$12.15**



#85142



#84825

#84825 Bending Mandrel Use this machined mandrel to form precise radial bends in photo etched parts, make neat wire loops, and shape other thin materials. Just use your fingers to roll the part around the diameter you need. Includes 1.5, 2.5, 3.5, 4.5 and 5.0 millimeter diameters. Made of stainless steel with vinyl-coated handle. 6" long. **\$10.45**

#85142 Larger Bending Mandrel Set Includes two tools that include diameters of 1.6, 2.6, 3.6, 4.6, 5.1, 6.0, 7.0, 8.0, 9.0 and 10.0 mm. **\$37.95**

Bending Mandrels Form Smooth, Consistent Curves in Detail Parts

The Best Way to Cut Photo-Etched Parts



The finely-contoured tips of the Xuron Professional ET Scissor cuts through tiny photo-etched parts cleanly and precisely with a delicate shearing action. Produces a neat, square edge without distorting adjacent parts. It's also ideal for cutting micro-size parts from sheet brass. Made of hardened steel with cushion grip handles and spring return. An innovative design that makes a difficult job easier. Overall length approximately 6".

#84903 Professional Photo-Etch Scissor List \$23.99 ... Our Price **\$21.95**

Etch Mate 3C Transforms Flat Photo-Etched Parts into Complex 3-D Objects



Etch Mate is a state-of-the-art tool that you use to fold, bend and shape photo-etched flat parts into 3-dimensional objects with unparalleled precision and efficiency. To use, simply slide your photo-etched part under one of the fingers on the bending head and bend up with the supplied blade. Etch-Mate has a wide assortment of finger widths and contours to accommodate all shapes and sizes of photo-etch sheet up to 6-1/2" long. Unique features ensure perfectly square bends every time. Made of tough engineering polymers and metal.

#83682 Etch Mate 3C Photo-Etch Bending Fixture List \$62.95 ... Our Price **\$52.45**

#83683 Extra Blades for Etch Mate Set includes two standard blades plus one 3" long extended blade for folding long photo-etched parts **\$9.40**

Introducing the MicroLux® Heavy-Duty High-Precision Micro Lathe

NEW!

You'll like the precise control and compact size of our MicroLux Micro Lathe. This table top machine tool is perfect for someone who wants a durable, well-designed lathe that fits in a small location. It is so sturdily constructed and smooth running, it can put fine finishes on turnings up to 6" diameter* and 10" long, yet is compact enough

(just 64 pounds) to be truly portable. The MicroLux Micro Lathe cuts all metals, including carbon steel, stainless steel, cast iron, copper, nickel-silver, brass and aluminum, plus non-metals, such as wood and plastic. And, the optional milling attachments and machining accessories (shown below) let you perform all the tasks you need to complete your project. **nominal*



#85181 MicroLux Micro Lathe includes 3-jaw chuck, 1/2" capacity rocker tool post, tailstock dead center, carriage feed gear set, backsplash, chuck guard, and wrench set.

List \$629.95 ... Our Price **\$499.95**

Outside the domestic 48 states, call Customer Service for special shipping instructions and quotation.

Just Look at These Features!

- Super rigid, heat-treated cast-iron bed with precision-ground ways
- Hardened and accurately finished main spindle supported by high-precision tapered roller bearings
- Zero-resettable handwheels with TRUE-INCH graduations
- Generous cross slide travel of 2-3/8" facilitates both lathe work and milling operations
- Powerful 1/5hp variable speed motor with reversing switch for bi-directional automatic feed and thread cutting
- A full complement of precision accessories is available to perform any machining operation

Micro Lathe Accessories

#85185 Milling Attachment **\$179.95**

#85182 Face Plate with Clamping Kit **\$81.95**

#85183 Steady Rest **\$47.95**

#85184 Follower Rest **\$39.95**

#85186 Compound Tool Rest **\$206.95**

#85187 Imperial Thread Cutting Gear Kit **\$32.95**

#85188 Wood Tool Rest and Spur Driver **\$81.95**

#85191 Quick Change Tool Post **\$132.95**

#85192 Extra Tool Post for above **\$56.95**

#85193 Extra Tool Holder for above **\$24.95**

#85189 Radius Cutting Tool **\$79.95**

#82746 Tailstock Chuck **\$34.95**

See our web site for more photos and full descriptions of the above items



#85185



#85182



#85183



#85184



#85186



#85187



#85188

Micro Lathe Specifications

Swing diameter over bed: 5-7/8"
 Distance between centers: 10"
 Headstock Taper: MT2
 Tailstock Taper: MT1
 Line Voltage: 120v, 50/60Hz
 Motor Output: 150 watts (1/5hp)
 Spindle bore: 3/8"
 Spindle speed: electronically variable between 100 and 2,000 rpm
 Overall size: 9" tall x 11" deep x 25" long
 Weight: 64 pounds
 (basic machine without accessories)

#85198 Mini Lathe Tool Set includes a straight, left and right tool holder, each with a 1/8" HSS bit; boring bar with 1/8" tool bit; 5/16" and 3/8" cut-off holders with HSS blades; double-ended knurling tool; and pivot-head knurling tool, plus 6 hex keys. Fits Micro and Mini Lathes. **\$59.95**

NEW!

Micro Turning Tool Set for Precision Lathe Work

Our professional quality turning tool set is made of the finest quality tool steel, carefully ground and polished with nicely turned and lacquered hardwood handles. Excellent for jewelry work, dollhouse miniatures, wooden toys, military models, railroad models and furniture finials... in fact, anytime you need miniature size lathe turnings in soft metals, wood or plastic. Many shapes can also be used for carving or engraving. 5-1/4" handles, 1-1/2" blades.

#20125 Micro Turning Tool Set
 List \$106.75 ... Our Price **\$83.95**



Measures machine tool set up angles



Measures grades



Measures superelevation

2-in-1 High-Precision Miniature Digital Level...

- Measures Exact Angles of Machine Tool Set Ups
- Measures Track Grades and Superelevation with Ultra Precision

Carpenter levels are just too large and inaccurate for machine set-up, and too clumsy for measuring model railroad track grades and superelevation. So, we encased our high precision digital level in a compact housing that's only 2" square by 1" deep. At the press of a button, the large LCD reads the relative angle between machine surfaces or the percent grade from sea level. Embedded magnets attach it securely to cast-iron/steel surfaces for hands-free measurement. Range: 0 to 45°/100%. Readability: 0.05°/0.01%. Hold button remembers last reading. Housing made from durable CNC-machined, satin-finish alloy. Includes battery and auto shut-off battery saver.

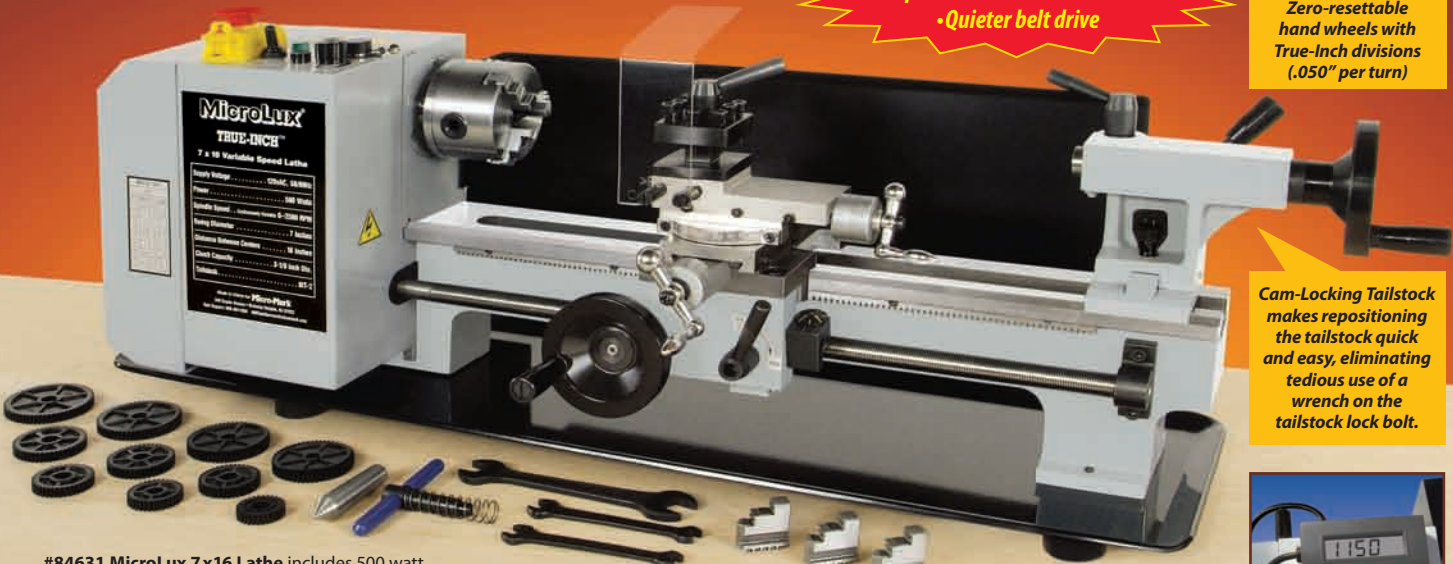
#84519 Digital Level **\$36.75**

MicroLux® High-Precision Heavy-Duty Lathe

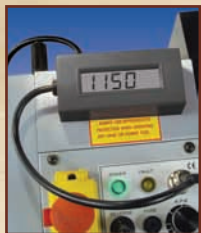
Micro-Mark again leads the way with the latest in high precision mini lathes. The MicroLux 7x16 Mini Lathe is not just a stretched version of older 7 x 10 and 7 x 12 mini lathes; our lathe has new design elements required for bigger jobs: • A more massive bedway to withstand extra forces generated by turning long pieces • A more-powerful 500 watt motor • Carefully positioned controls for easy access and safety • A specially configured and strengthened tailstock to accommodate long workpieces. Careful workmanship gives you high dimensional accuracy and long life. Smooth operation lets you put fine finishes on turnings up to 7" diameter and 16" long. Yet, it's compact enough (less than 100 pounds) to be portable. Our mini lathe has true imperial (inch) feed screws and dials (.050 inch per turn), so metric conversions are not required. The MicroLux Mini Lathe is so versatile, it will cut all metals, including carbon steel, stainless steel, cast iron, aluminum, brass, copper, bronze, and nickel-silver, plus non-metals such as wood and plastic. And, with the optional accessories sold separately, it will perform virtually any task you'll ever need.

Introducing the MicroLux 7x16 Mini Lathe

- Now 16" capacity
- More powerful 500w brushless motor
- Quieter belt drive



Cam-Locking Tailstock makes repositioning the tailstock quick and easy, eliminating tedious use of a wrench on the tailstock lock bolt.



#84631 MicroLux 7x16 Lathe includes 500 watt variable-speed brushless motor with ultra-quiet belt-driven spindle, 3-jaw self-centering chuck (see our #82512 on page 5 for specs.) with inside/outside jaws and wrench, compound slide with 5/8" capacity four-position tool post and chip deflector, MT2 dead center for tailstock, carriage power feed with change-gear set for threading, thread position indicator, splash guard, chip tray, tool set and instruction manual/parts diagram. **\$849.95**

Use our web site shopping cart to calculate freight charge for shipments outside 48 contiguous U.S., or call our order line for assistance.

\$65
ADDITIONAL
FREIGHT
ANYWHERE IN
LOWER 48 STATES

#84692 Digital Speed Readout for 7 x 16 Lathe includes magnetic base. Plugs into control panel to display spindle speed in RPM. **\$133.50**

The Micro-Mark Difference...

- True-Inch dials
- Heavy duty bedway
- Cam-lock tailstock
- Full technical support
- Easy-to-read manual
- Packed in sub-assemblies for safe, easy transport
- No messy red goop to clean off!

MicroLux Lathe Specifications

Max. swing over bed: 7" diameter	Compound slide travel: 2.165"
Max. swing over carriage: 4.5" dia.	Tail spindle travel: 2.125"
Distance between centers: 16"	Tail spindle taper: MT2
Main spindle speeds: Continuously variable between 0 and 2,500 rpm	Motor: 500 watt (0.67hp) brushless DC (operates from standard 120v AC wall outlet)
Spindle bore: .787" diameter	Thread cutting: 12 to 52 tpi in 18 steps
Main spindle taper: MT3	Overall size: 12.75" high x 12" deep x 38" long
Carriage cross-feed travel: 2.560"	Weight: 86 lbs. (basic machine, no accessories)

Just Look at These Features!

- Super rigid, heat-treated cast-iron bed with precision-ground V-ways
- Hardened and accurately finished main spindle supported by centripetal ball bearings
- Carriage power feed
- Powerful adjustable-speed DC motor and reversing switch for bi-directional automatic feed and thread cutting
- Zero-resettable hand wheels with inch divisions (.050 inch per turn) eliminate tedious metric conversions
- Four-position tool post makes tool changes fast and easy

Special Offer!

Essential Lathe Accessory and Attachment Sets get you up-and-running right out of the box!



#84900 Deluxe Starter Tooling Set for Lathe includes #82501 Cutters, #82766 Cut-Off Tool, #82507 Tailstock Chuck, #82509 Ball Bearing Center, #31114 Center Drills, #82506 Quick Change Tool Post. (See following pages for descriptions of individual items) If purchased separately \$228.20 ... Our Price **\$193.95 ... SAVE \$34.25!**

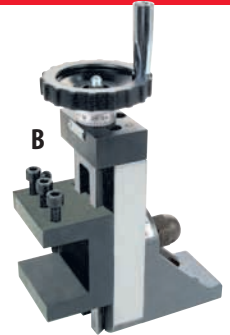
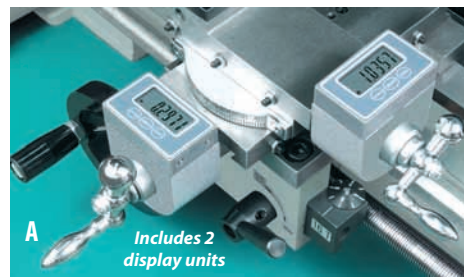
#84896 Lathe Starter Tooling Set includes all of the above EXCEPT #82506 Quick Change Tool Post. If purchased separately \$142.25 ... Our Price **\$119.95 ... SAVE \$22.30!**

#84897 Lathe Attachment Set includes #82505 4-jaw Independent Chuck, #82503 Steady Rest, #82504 Follower Rest, #83117 Carriage Stop, #83039 Digital Readout Set. (See following pages for descriptions of individual items) If purchased separately \$372.50 ... Our Price **\$309.95 ... SAVE \$62.55!**

Accessories for MicroLux 7x16 Lathe

Accessories also fit many 7x10, 7x12 and 7x14 mini lathes, and other machines. Check tool holder capacity and shank size before ordering. User provides mounting hardware.

A. #83039 DIGITAL READOUT FOR 7x10, 7x12, 7x14 AND 7x16 MINI LATHES INDICATES BOTH INCHES AND MILLIMETERS All the parts you need to equip a mini lathe with an accurate digital readout that displays inches and millimeters. Includes on/off, rezero, and inch/mm buttons. Resolution: .0001". **\$184.95**

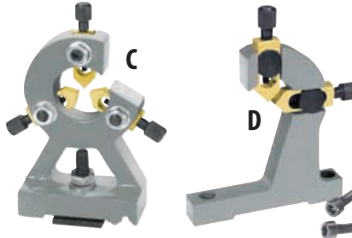


B. #82734 MILLING ATTACHMENT FOR MINI LATHE bolts to top of cross slide of 7x10, 7x12, 7x14 and 7x16 mini lathes to hold stock while milling with a cutter mounted in the headstock. Moves 3-1/2" vertically. Rotates on the cross slide pivot. Tilts up to 50° left or right of vertical. Heavy duty 2-5/8" wide vise holds workpieces up to 2" high. 16 tpi lead screw. Includes adjustable gibs and lock lever. Made of cast iron and steel with molded handwheel. **\$199.95***



C. #82503 STEADY REST clamps onto bed to support long stock. **\$43.95**

D. #82504 FOLLOWER REST bolts to carriage. Follows behind cutting tool to prevent deflection of thin stock. Color may vary. **\$38.95**



E. #82505 4-JAW INDEPENDENT CHUCK allows turning off-center or holding irregular parts. Body dia. = 3.150". Internal jaws clamping range = .196 to 1.378". External jaws clamping range = 1.378 to 3.150". Approx. 7/8" dia. thru-hole. **\$79.50**



F. #83371 SELF-CENTERING 4-JAW CHUCK with 5/8" dia. bore. Body dia. = 3.150". Internal jaws clamping range = .079 to .866". Internal jaws jamming range = .984 to 2.756". External jaws clamping range = .866 to 2.480". Includes internal and external jaws, plus key. **\$111.25**



G. #82512 3-JAW SELF-CENTERING CHUCK Body dia. = 3.150". Internal jaws clamping range = .079 to .866". Internal jaws jamming range = .984 to 2.756". External jaws clamping range = .866 to 2.480". Approx. 5/8" dia. thru-hole. **\$99.95**



H. #83266 LARGER CAPACITY SELF-CENTERING 3-JAW CHUCK with 7/8" dia. bore allows full use of hole through MicroLux Lathe spindle. Body dia. = 3.937". Internal jaws clamping range = .078 to 1.181". Internal jaws jamming range = 1.181 to 3.543". External jaws clamping range = 1.181 to 3.150". **\$139.35**



J. #82506 QUICK CHANGE TOOL POST Mounting base with dovetail lock and three adjustable holders (3/8" capacity) let you preset tool bits to the perfect cutting height without shimming. Makes tool bit changes quick and easy. **\$85.95**



#82574 Extra Tool Holders (Set of 3) \$48.95

K. CENTER DRILL SETS Drills properly contoured holes so workpiece can be mounted between centers.

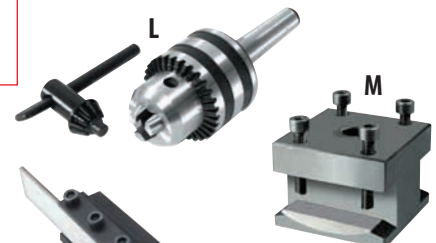
#31114 Three-piece set includes nos. 0, 1 and 2. **\$12.55**

#82284 Four-piece set includes nos. 1, 2, 3 and 4. **\$16.75**

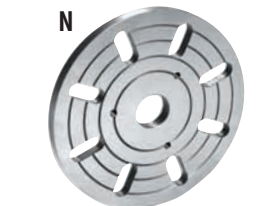
L. #82507 TAILSTOCK CHUCK MT2 shank. Holds drills 1/32" to 1/2" diameter. Includes key. **\$40.45**



M. #82689 ROCKER TOOL POST lets you adjust position of tool bit to exact center of workpiece without shimming. Compensates for worn or resharpened cutting tools. Double-sided to hold two bits. Indexes on compound rest. 5/8" capacity. **\$34.60**



N. #82502 FACE PLATE bolts to headstock spindle using bolts from 3-jaw chuck. 6-1/4" diameter. **\$28.75**



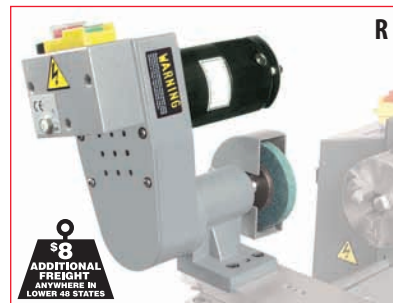
P. #82766 JUMBO CUT-OFF TOOL AND HOLDER Super sharp 1/2" high blade for heavy duty cutting-off of large diameter stock. 3/8" tool holder with black oxide finish fits lathe tool post. Blade is 4-1/2" long x 3/32" wide. *Note: Must be used with #82506 Quick Change Tool Post.* **\$20.95**

#82767 EXTRA 1/2" CUT-OFF BLADE \$10.45

Q. #82511 CUTTER SET includes 3 double ended tool bits for turning, facing, threading and parting, adapter for 6mm (.236") square tool bits, and angled holder for 4.8mm x 8mm (3/16" x 5/16") rectangular bits. **\$76.50**



R. #82883 GRINDER ATTACHMENT FOR MINI LATHE bolts to top of cross slide of 7x10, 7x12, 7x14 and 7x16 lathes to grind stock smooth while turning in the headstock. 1/3hp motor turns grinding wheels 6,000 rpm; plugs into 120v AC wall outlet. Includes two 3-1/8" dia. x 3/8" wide grinding wheels: one for tool bits, one for workpieces. **\$145.95***



Replacement Grinding Wheels

#82961 For workpieces (pink, 60/80 grit) **\$15.95**

#82962 For tool bits (green, 60/80 grit) **\$17.25**

S. #82501 CARBIDE CUTTERS 11-piece set with 5/16" square shanks **\$49.95**



*Use our web site shopping cart to calculate freight charge for shipments outside 48 contiguous U.S., or call our order line for assistance.



Introducing the MicroLux Micro Milling Machine

The MicroLux Micro Milling Machine will soon become the *de facto* standard against which all miniature milling machines are measured. Micro-Mark engineers took the best features of other hobby-sized milling machines and incorporated them into a new design that has more power, increased capacity, superior durability and maximum precision. The MicroLux Micro Milling Machine features:

- .100" per turn feed screws with zero-resettable dials
- a 150 watt motor that boosts power by 250%*
- cast iron construction with twice the rigidity of aluminum
- a weight of 52 pounds...quite portable, yet more stable than lightweight, similarly-sized machines
- a compact size that takes up a small amount of valuable workbench space
- more durability at a much lower price. *Compared to Sherline standard motor

MicroLux Micro Mill Specifications

Max clearance, table to spindle	8.75"	Table size	2.75" x 13"
Throat	2.25"	Hold down provision	2 "T" slots
Travel, "X" Axis	8"	Shipping weight	60 lbs.
Travel, "Y" Axis	4"	Movements in addition to X-, Y- and Z-axes: Column tilts 90 degrees L/R (practical use is about 60 degrees L/R)	
Travel, "Z" Axis	7"	Motor:	
Hole through spindle405" (10mm)	150W DC electronically load compensated speed control	
Spindle nose thread	3/4-16 T.P.I.	Spindle speed range:	
Spindle taper	#1 Morse	70 – 2800 RPM continuously variable by electronic speed control	
Handwheel graduations001"		
Width overall**	19.5"		
Depth overall**	16"		
Height overall**	23.5"		

#84659 MicroLux Micro Milling Machine includes 10mm chuck with key, 2 drawbars – inch and metric, 12mm/14mm open end wrench, 10mm/12mm open end wrench, 5.5mm/7mm open end wrench, 8mm hex key, 4mm hex key, 3mm hex key, 2mm hex key, spanner wrench, set of T-nuts with 4mm thread for table slots, user manual. **\$524.95**

BEST BUY! NOW ONLY \$449.95

**\$22
ADDITIONAL
FREIGHT
ANYWHERE IN
LOWER 48 STATES**

Use our web site shopping cart to calculate freight charge for shipments outside 48 contiguous U.S., or call our order line for assistance.

**TRUE-INCH™
Micro-Mark®**

Shown with optional
vise, collet, and end mill

T-slots accommodate
Sherline accessories



.100" per turn feed screws have zero-resettable dials



Adjustable-speed motor with power boost circuitry



Tilting column



Quiet belt drive and powerful motor



Anti-backlash lead screws

Accessories for MicroLux and Many Other Brands of Milling Machines

#84755 3" DIAMETER ROTARY TABLE installs vertically or horizontally on smaller milling machine tables to cut circular grooves, gears, bolt patterns and other custom shapes. Handwheel with engraved markings rotates workpiece; lock screw holds table securely in position. Includes M6 x 1.0 threaded center hole and hardware for mounting accessories and stock. 3-1/4" x 4-1/4" base plate. Overall height 1-5/8". **\$129.95**



#84687 MINIATURE CHUCKING REAMER SET with straight, round shanks for use in chucks and collets. Includes six high speed steel reamers in the following sizes: 3/32, 1/8, 5/32, 3/16, 7/32 and 1/4 inch. **\$31.45**



#84686 MICRO FLY CUTTER for small milling machines. 1/4" shank with 1/8" square x 3/4" long HS tool bit. **\$8.35**

MicroLux® High-Precision Heavy-Duty Miniature Milling Machine



• Now with R8 spindle
• More powerful 500w brushless motor
• Quieter belt drive

The feature-packed design and robust construction of the MicroLux Milling Machine makes it well-suited for your most demanding projects. Its smooth operation lets you put fine finishes not only on machinable metals, but on non-metals like wood and plastic as well. For operating convenience, we've equipped it with .050 inch-per-turn table feed screws and dials, and the headstock is lever-actuated to make drilling operations a breeze. The column can also be tilted for angled milling and drilling, and easily separates from the base for one-man relocation or storage. A MicroLux Milling Machine is the perfect companion for your MicroLux Lathe...it's also backed by Micro-Mark's guarantee of hassle-free product service.

The Micro-Mark Difference...



- True-Inch dials
- Full technical support
- Easy-to-read manual
- Packed in sub-assemblies for safe, easy transport
- No messy red goop to clean off

JUST LOOK AT THESE FEATURES:

- Super rigid, heat-treated cast-iron base, column and headstock with precision-ground V-ways
- Hardened and accurately finished main spindle supported by high precision centripetal roller bearings
- Tilting column for angle milling/drilling
- .050" per turn table feed screws with zero-resettable dials
- Powerful adjustable-speed motor with feedback-sensing power boost circuitry
- Lever-actuated spring-assisted headstock performs drilling operations with ease



Column tilts up to 45° for angled milling and drilling



.050" per turn feed screws have zero-resettable dials



Adjustable-speed motor with power boost circuitry



Lever-actuated headstock makes drilling easy... Micrometer-downfeed spindle makes milling precise



#84692 Digital Speed Readout for R8 Milling Machine includes magnetic base for convenient mounting. Plugs into rear of control panel to display spindle RPM. \$133.50

#84630 R8 Milling Machine includes variable-speed 500 watt (2/3hp) brushless motor with ultra-quiet belt-driven spindle, 1/2" drill chuck and drawbar, table locks, column lock and drill stop, power supply with feedback-sensing power boost circuitry, spring-assisted headstock return, V-way chip guards, chuck/collet chip guard, indicator scales for the X and Z directions, fine-adjust knob for the Z direction, safety cut-off switch, wrench set and instruction manual/parts diagram. \$742.95

Use our web site shopping cart to calculate freight charge for shipments outside 48 contiguous U.S., or call our order line for assistance.

\$72
ADDITIONAL FREIGHT ANYWHERE IN LOWER 48 STATES



MICROLUX MILLING MACHINE SPECIFICATIONS

- Table size: 16" wide x 3-3/4" deep
- Table travel (X direction): 8"
- Cross slide travel (Y direction): 4"
- Headstock travel (Z direction): 7"
- Clearance (spindle to table-top): 10"
- Center of spindle to face of column: 6"
- Spindle taper: R8
- Column angle: tilts from -45° to +45°
- Overall size: 30" high x 20" deep x 20" wide
- Spindle speed: Continuously variable between 0 and 2,500 rpm with belt-driven spindle
- Motor: 500 watt (0.67hp) brushless DC, operates from standard 120v AC outlet
- Weight: 110 pounds (basic machine without accessories)

Special Offer!

Essential Accessory and Attachment Sets get you up-and-running right out of the box!



#84898 Milling Machine Starter Tooling Set includes #82577 4 Inch Milling Vise, #84700 Collet Set, #82576 8-piece End Mill Set, #83413 Parallel Set, #84749 Edge Finder. (See following pages for descriptions of individual items.) If purchased separately \$286.50 .. Our Price \$219.95 .. **SAVE \$66.55!**



#84899 Milling Machine Attachment Set includes #83379 Boring Head, #82765 Carbide Boring Tools, #84692 Digital Speed Readout, #84752 Fly Cutter, #82578 Clamping Set. (See following pages for descriptions of individual items.) If purchased separately \$327.35 .. Our Price \$299.95 .. **SAVE \$27.40!**

Accessories for MicroLux and Many Other Brands of Milling Machines and Other Machine Tools

Check tool holder capacity and shank size before ordering. User provides mounting hardware.



A



B

NEW!

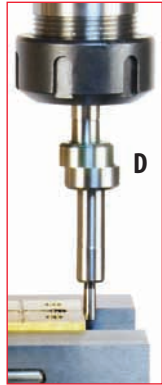
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A. ER COLLET SETS FOR MILLING MACHINES AND LATHES

ER collets have a wide gripping range (about .040") and provide a fast, easy and accurate way of holding end mills, fly cutters, saw mandrels and drill bits in milling machine spindles. When used in a lathe, they hold stock more accurately and have a better grip than chucks, and thin-wall tubes can be gripped without distortion. They're quick to set up and can be used at high speed. Our ER collet sets include a precision ground shank and "snap-in" collets with compression nut and spanner for easy tightening. The wood case makes selection easy and offers good protection during storage.

Set #	Price	Type	Shank	Drawbar Hole
#84698	\$79.95	ER16	MT1	M6 x 1.0
#85337	\$79.95	ER16	MT2	M10 x 1.5
Both include collet sizes: 1/32, 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8				
#84699	\$110.25	ER25	MT3	M12 x 1.75
Includes collet sizes: 3/64, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8				
#84700	\$110.25	ER25	R8	7/16-20
Includes collet sizes: 3/64, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8				

NEW!



D



E



F

B. #84989 HEAVY-DUTY INDEXABLE END MILL FOR R8 SPINDLE has carbide cutting-tip inserts that can be indexed to three different edges to maintain cutting efficiency and production quality without resharpening. To renew the cutting action, just loosen the retaining screws and index the insert to a new edge. Cutting diameter 1-1/4". Includes two carbide inserts and hex key. **\$36.75**

C. #84990 EXTRA CARBIDE INSERT for indexable end mill **\$4.50 ea.**

D. #84749 COMBO EDGE FINDER installs in collet or chuck of milling machine. Precisely locates edge of workpiece relative to center of spindle. Works in both feed directions for quick and easy use. 10mm shank; 4mm dia. tip. Overall length 3-5/8". **\$13.60**

E. BORING HEAD Use to machine a pre-drilled hole or inside wall of a cylinder to final size (up to 3" dia.) and finish. Head offsets up to .625" and holds 1/2" shank boring tools sold below (F). Includes adjuster dial with .001" graduations and 2 wrenches. **\$76.95 ea.**

#83379 Boring Head with R8 shank (fits MicroLux #84630 Milling Machine)

#82764 Boring Head with MT3 shank (fits MicroLux #82573 Milling Machine)

#84685 Boring Head with straight 1/2" shank

F. #82765 CARBIDE TIPPED BORING TOOL SET for use with boring heads sold above (E). Includes 9 different sizes in tip lengths from 3/4" to 3" with 1/2" shanks and nicely finished wood storage rack. **\$38.80**



G



H

G. #84752 FLY CUTTER WITH R8 SHANK Includes 3/8" square x 3" tool bit. A heavy-duty accessory for the R8 mill that machines flat surfaces up to 4" wide. 7/16-20 threaded hole for drawbar. **\$32.95**



H. #83411 8" DIGITAL READOUT installs on your lathe, milling machine or other machine tool to display the exact location of the carriage, spindle or milling table. The large, easy-to-see Liquid Crystal Display reads directly in inches or millimeters up to 8". Eliminates the counting of dial turns and errors due to lead-screw backlash. Re-zeros at any location. Includes on/off, zero and inch/mm buttons, plus battery and instructions. Resolution .0005". **\$66.65**

Note: Due to the wide range of applications for this device, installation is left up to the purchaser.

J. #82768 3-PIECE FLY CUTTER SET Used in the milling machine to cut a large flat surface on a piece of stock. Includes 3 black oxide steel holders: 3/4", 1-1/8" and 1-3/8" dia., 3 ready-to-sharpen tool blanks, and wood storage rack. 1/2" shanks. **\$26.20**

#82769 SET OF 3 EXTRA TOOL BLANKS (One for each holder) **\$10.45**

K. #83952 POWER FEED Saves laborious hand cranking and feeds table at uniform rate to produce fine milled finishes. Electronic circuitry controls table speed from 0 to 12" per minute in both directions; automatically stops table at end limits or in case of cutter overload. Retains hand crank for normal operation. For use with machines with slotted end of lead screw under the table (check your machine before ordering). **\$183.95**

L. 6-PIECE END MILL SETS Double end, center cut, 3/8" shank. Sets include 1/8, 5/32, 3/16, 1/4, 5/16 and 3/8 inch end mills. 3/8" length of cut.

#84633 6-piece End Mill Set, 2-flute for aluminum and brass. **\$41.95**

#84634 6-piece End Mill Set, 4-flute for steel. **\$41.95**

M. #82576 8-PIECE END MILL SET (SINGLE END) Includes eight center cut, 2-flute end mills in the following sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 9/16 and 5/8 inch. **\$52.45**

N. #82751 6-PIECE END MILL SET (SINGLE END) Includes center cut 2-flute end mills in the following sizes: 1/8, 5/32, 3/16, 1/4, 5/16 and 3/8 inch. **\$28.75**

P. 4-PIECE END MILL SETS Double end, center cut, 1/4 inch shanks. Sets include 1/8, 5/32, 3/16 and 1/4 inch dia. end mills. (Length of cut: 3/8, 7/16, 1/2 and 9/16 inch, respectively.)

#84674 4-piece set of 2-flute end mills for aluminum and brass. **\$19.95**

#84675 4-piece set of 4-flute end mills for steel. **\$19.95**



K



L

#84634



M



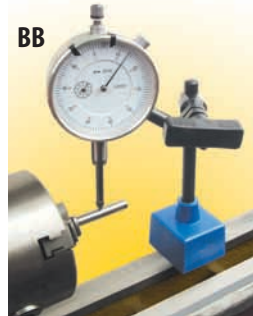
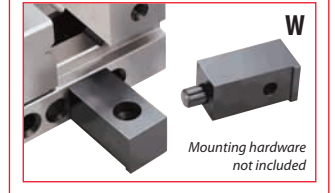
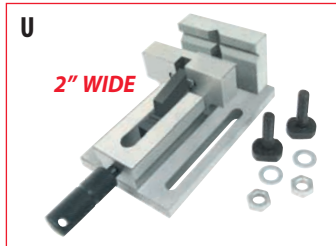
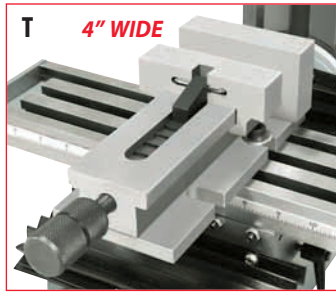
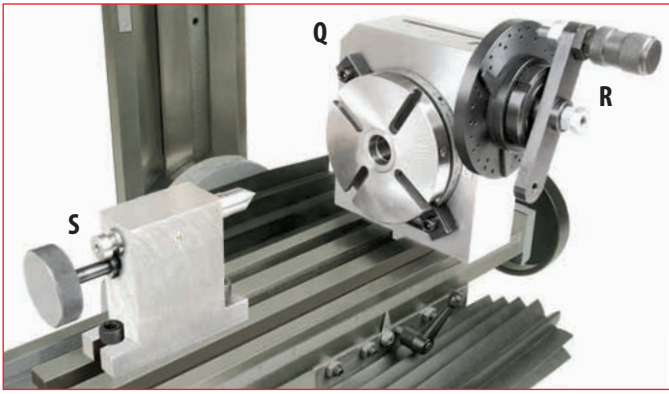
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P

#84674

Accessories for Milling Machines, Lathes and Other Machine Tools
 Check tool holder capacity and shank size before ordering. User provides mounting hardware.



Q. #82792 ROTARY TABLE 4" diameter. One revolution of the handwheel rotates the table 5°. Allows you to create an incredible variety of precision parts. Table has MT2 hole. Includes adapter plate to mount the #82512 3-Jaw Chuck and #82505 4-Jaw Chuck. See web site for specifications. **\$336.95***
T-slot size = 5/16". A perfect fit with #82748 Clamping Set sold below (X).

\$15
 ADDITIONAL
 FREIGHT
 ANYWHERE IN
 LOWER 48 STATES

R. #82793 DIVIDING PLATE Replaces the handwheel on the rotary table. Accurately rotates stock a set number of degrees. Examples: for milling teeth on a gear, flats on a nut, or drilling equally spaced holes. **\$78.15**

S. #82794 TAILSTOCK Supports the end of a shaft when rotary table is placed vertically on the machine table. **\$90.95**

#82795 Buy the Rotary Table, Dividing Plate and the Tailstock together for only \$448.95*

\$15
 ADDITIONAL
 FREIGHT
 ANYWHERE IN
 LOWER 48 STATES

T. #82577 4" QUICK-LOCK MILLING VISE bolts directly to top of milling table. Jaws are 4" wide x 7/8" deep and open 3-1/8". Overall height 2-5/8". Made of machined steel. Note: Not for use with #84659 Micro Milling Machine. **\$73.45**

U. #82747 2" QUICK-LOCK MILLING VISE bolts directly to top of milling table to hold stock while machining. 2" wide x 5/8" deep jaws have grooves for holding round objects; opens 1-1/2". Overall height 1-5/8". Made of machined steel. **\$39.95**

V. #84748 PRECISION TOOLMAKERS VISE Angled clamping screw on moveable jaw exerts downward force that keeps workpiece from lifting out of proper alignment. Precision ground on all surfaces. Clamps to milling table. Jaws are 2" wide x 1" deep. Opens to 3-1/4". Overall height 2-3/16". Base plate is 6" long. Includes V-grooves for round workpieces and threaded hole for mounting stops and other fixturing. **\$62.95**

W. #84779 Clamp Set for precision vise sold above (V). Includes two mounting blocks with 8mm diameter pin. Mounting hardware not included. **\$15.75**

X. #82748 CLAMPING SET includes 4 each jaws, studs, bolts, nuts and washers to secure workpieces. **\$19.50** A perfect fit with #82792 Rotary Table sold above (Q).

Y. #83383 TWO-WAY VISE FOR MILLING MACHINE AND DRILL PRESS Mounts to milling machine or drill press table. Rotates 360 degrees and inclines from 0 to 90 degrees to mill or drill at any angle in-between. 2" wide x 1" deep jaws open 1-7/8". Height at 0 incline is 3-5/8". Includes engraved markings for degrees of incline and rotation. **\$157.95**

Z. #83415 ULTRA-PRECISION 1-2-3 BLOCKS Valuable assets to tool rooms and inspection labs, Ultra-Precision 1-2-3 blocks are extremely useful for layout and set-up work. Our 1-2-3 Blocks (1" x 2" x 3") are case hardened on all sides to 55-60 Rc and ground parallel, flat and square within 0.0001". They have 5 tapped holes (3/8-16) and 18 untapped holes so they can be bolted together in pairs to form custom sizes, angle plates, V-blocks, etc. Set includes 2 matched blocks with wood or metal protective storage case. **\$37.45** per set
#84644 Economy Version. Ground within 0.0003". No case. **\$19.95** per set

AA. #84753 OVER/UNDER CHUCKING REAMER SET Includes .001" undersize reamers for press-fit and .001" oversize reamers for sliding-fit of pins and shafts. Nominal sizes 1/8, 3/16, 1/4, 5/16, 3/8, 7/16 and 1/2 inch...14 high speed steel reamers in all, plus vinyl storage case. **\$94.50**

#84744 INDICATOR WITH MAGNETIC BASE Use this dial indicator with your lathe, milling machine or metal surface plate to measure surface flatness, alignment of vises and workpieces, roundness of lathe work, perform machine set-up and more. Magnetic base and adjustable arms position indicator for accurate readings. Easy-to-read 2" diameter dial measures in thousandths of an inch (total range: 1"). Includes zero-adjust ring and tolerance-limit pointers. This is a precision instrument that no workshop should be without. **\$52.45**

CC. #82773 7-PIECE HSS REAMER SET with round shanks for use in milling machine, drill press and lathe tailstock chucks to machine holes to exact size. Includes 1/8, 3/16, 1/4, 5/16, 3/8, 7/16 and 1/2" sizes from 3-1/2" to 8" long in compartmented storage case. **\$52.45**

DD. #83413 20-PIECE PARALLEL SET Includes 10 pairs of 1/8" x 6" bars, from 1/2" to 1-5/8" high (for larger vises) in 1/8 inch increments, plus compartmented molded case. (Color may vary.) List \$51.95... Our Price **\$36.75**

*Use our web site shopping cart to calculate freight charge for shipment outside 48 contiguous U.S., or call our order line for assistance.