

Quality, Economical Tools for Successful Modeling!

49-4 THE CHOPPER \$34.95

One of the most useful tools ever for model builders working in wood or styrene strip materials. An economical rigid, precision tool for cutting model building stripwood and plastic material to length quickly, cleanly. Provides clean, neat, feather free & accurate cuts easily and inexpensively using easily obtainable and economical single edge razor blades.

Unlike some other cutting tools, The CHOPPER's rigid handle design is not only safer than a movable cutting design, it ensures consistently square straight cuts & accurately angled mitre cuts everytime. Mitre cuts are a snap with the 30, 45, and 60 degree guides included.

An adjustable stop permits the exact duplication of pieces up to 3-1/4" length (see CHOPPER III for working longer finished pieces, see CHOPPER II #69-4 for premium die cast aluminum base, replaceable cutting surface version of #49-4). Great for car decking, ties, trestle building, miniatures parts, and 1,000 other modeling uses.

Completely assembled and ready to use. Including installed razor blade.

Caution—very sharp cutting tool (razor blade) Recommended for adult craftsmen or with adult supervision of less experienced users. Work area: 5.25" x 7.5" Base: 7.5" x 7.5" Weight: 0 lb-9.5 oz.

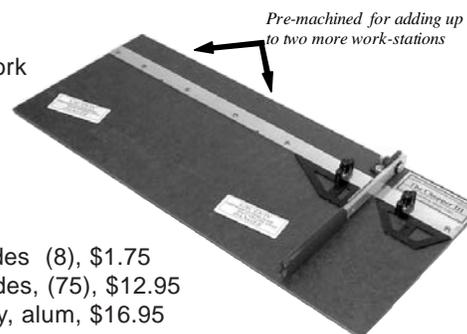


59-4 THE CHOPPER III \$41.95

Same as THE CHOPPER above except longer work surface with two additional work stations ready for installation of optional #4914-4 handle assembly. 18" wide base.

Used in production work by many professional model builders and kit manufacturers, with dedicated multiple setup for various parts

Work area: 5.25" x 18" Base: 7.5" x 18" Weight: 1 lb-3.2 oz.



Replacement parts (49-4, 59-4)

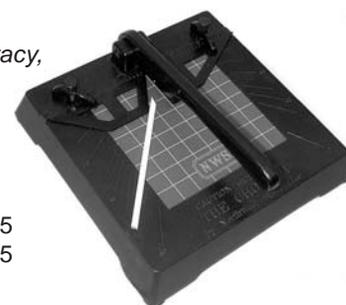
4910-4	90-30 Angle stop guide, plastic, \$1.49	4915-4	Single edge razor blades (8), \$1.75
4911-4	45-60 Angle stop guide, plastic, \$1.49	4916-4	Single edge razor blades, (75), \$12.95
4925-4	Clamp Assembly (pr), \$2.95	4914-4	Extra handle assembly, alum, \$16.95

69-4 THE CHOPPER II \$46.95

No sloppy, "fits all", cuts any angle (whether it maintains the angle you want or not) complexity. Use the precision mitre guides to assure accurate angle and repeatability.

Retains the high precision, extremely sharp, inexpensive single edge razor blade as the cutting tool to assure economy, clean cuts from a blade you can find when you need it—at most drug, hardware or paint stores—and can afford to replace as often as necessary for clean, sharp cuts every time. Increase your precision and model making efficiency.

- Fits your workspace—only 7"x 7"
- Replaceable cutting mat for cleaner cuts
- Cuts all model building woods, plastics
- Precision guides for common angles 30, 45, 60 degrees.
- Safer, with more accurate repeatability. Rigid handle mount system assures greater accuracy, repeatability of cuts and more safety—no loose handle that can slip or flip into unsafe position exposing cutting blade.
- Cutting depth of 1/4" maximum
- Diecast aluminum frame, light (under 2 lb.) and strong
- Right-hand or Left-hand opera



Replacement parts (69-4)

6910-4	90-30 Angle stop guide, metal, \$1.95	4915-4	Single edge razor blades (8), \$1.75
6911-4	45-60 Angle stop guide, metal, \$1.95	4916-4	Single edge razor blades, (75), \$12.95
6925-4	Clamp Assembly (pr), \$4.95	6904-4	Extra handle, die cast w/blade, \$12.95
6905-4	Cutting mat, \$3.95		

57-4 THE TRUE SANDER \$43.95

True-up cutoff ends to perfect fit—A tool in the tradition of THE CHOPPER that provides accurate, quick finish sanding of end cuts on wood or plastic parts for fine fit. The adjustable angle guide allows you to accurately repeat any angle for proper fit on mitred corners as well as square cuts. Also included are pre-set 30, 45, and 60 degree mitre guides. Unlike some motor driven sanding tools The True Sander gives you that delicate touch needed for working with small parts. Work area: 5" x 6" Sand block face heights: 1" & 1.5" Base: 7.5" x 8.5" Weight: 1 lb-0.8 oz.



Replacement parts (57-4)

4910-4	90-30 Angle stop guide, plastic \$1.49	4943-4	Semi-circle assembly, \$2.95
4911-4	45-60 Angle stop guide, plastic, \$1.49	4948-4	Clamp Assembly, red screw (pr), \$2.95
4942-4	Angle strip, alum, \$2.95	4941-4	Sanding block, alum \$9.00

62-4 THE DUPLICUTTER II \$44.95

This tool was designed by and for model builders who work in styrene plastic to make their model building more efficient, accurate and fun. Several needed functions are performed such as (A) squaring a piece of sheet so that subsequent pieces are easy to handle; (B) Securely holding sheet material providing an easy method to scribe and snap off pieces as desired; (C) But probably the most important function is the ease of making parts exactly the same size—make duplicate car sides, building sides or sections, anything where you need more than one of the same size, shape part. Makes the job go faster as well as providing a more accurate duplicate part—particularly important when the project requires a quantity of duplicate parts. Accepts sheets up to 8-3/16" wide. Single edge razor blade is the scoring tool (included) (or use your X-acto knife or similar plastic scoring tool). Work area: 8-3/16" x 5" Base: 7-1/2" x 9-3/4" Weight: 1 lb



Replacement parts (62-4)

4925-4 2.95 Clamp Assembly (pr) 4915-4 1.50 Single edge razor blades (8)
6233-4 4.50 Alignment plate, alum. 4916-4 9.95 Single edge razor blades, (75)

PUTS 'EM TOGETHER, TAKES 'EM APART PULL, PRESS, PUNCH & EMBOSS

50-4 THE SENSIPRESS+ \$129.95

A sensitive arbor press small enough to give you that delicate touch need for working with fine miniature models and parts, yet sturdy enough to apply all the pressure you need—up to 250 pounds pressure. Comes completely assembled and ready to use. See #5000-4 series for accessory tooling. See tool #51-4 (below) for optional attachment to enable precision location embossing of simulated rivets, etc. Throat: 4" deep x 3.25" high Base: 3" x 7" Weight: 2 lb-6 oz.

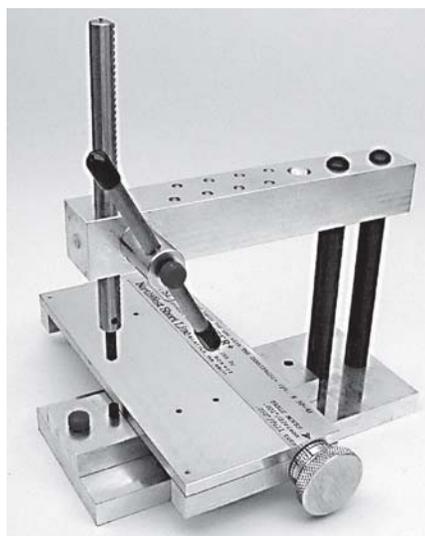


ACCESSORIES

5050-4 3.95 Oversize 1/2" O.D.
5051-4 3.95 Blank 5055-4 3.95 Bored 1.5mm
5052-4 3.95 1/16" Tip 5056-4 3.95 Bored 2.0mm
5053-4 3.95 3/32" Tip 5057-4 3.95 Bored 3/32"
5054-4 3.95 Cone Tip 5058-4 3.95 Bored 1/8"
5059-4 19.95 Set of all above except #5053-4 which is included with #50-4 (9 pieces)
5060-4 4.50 "V" Plate for Sensipress+
5061-4 3.50 3/16" tool holder die bore plug
5100-4 4.50 Centerpunch/Universal punch
5023-4 18.95 5" Posts set – greater work depth
5024-4 24.95 8" Posts set – greater work depth
5025-4 29.95 Die bore access slot base

HOLE PUNCH ACCESSORIES \$12.95 ea

5010-4 1/16" Round Punch 5011-4 1/16" Round Die
5012-4 5/64" Round Punch 5013-4 5/64" Round Die
5014-4 3/32" Round Punch 5015-4 3/32" Round Die
5016-4 1/8" Round Punch 5017-4 1/8" Round Die
5001-4 5.50 Punch Holder Adapter



51-4 THE RIVETER \$89.95

This attachment turns the SENSIPRESS+ into a precision alignment and spacing rivet embosser, working as a calibrated advancing table (not a milling table). The advancing knob is calibrated in .001" increments of movement providing you with extremely accurate spacing capability. A full turn (50 divisions) advances the table .050". Punch and Die sets available from .010" (produces an HO scale 1" rivet) to .060" (can be spaced as little as 150% of rivet diameter). An .015" punch and die set is included with THE RIVETER. Works great on light brass, aluminum and styrene sheet .015" and thinner. Note that THE RIVETER is not a milling table. Comes completely assembled and ready to install on the base of THE SENSIPRESS+ tool.

Work table: 3" x 7" Travel length: 5" weight: 1 lb- 4 oz.

RIVET EMBOSSING TOOLS for the Riveter \$6.00 ea

5110-4 .010" Punch 5111-4 .010" Die
5115-4 .015" Punch 5116-4 .015" Die
5120-4 .020" Punch 5121-4 .020" Die
5130-4 .030" Punch 5131-4 .030" Die
5140-4 .040" Punch 5141-4 .040" Die
5150-4 .050" Punch 5151-4 .050" Die
5160-4 .060" Punch 5161-4 .060" Die

5101-4 Set of 11 above tools (5100-4 thru 5151-4 less 5115-4 & 5116-4) \$39.95

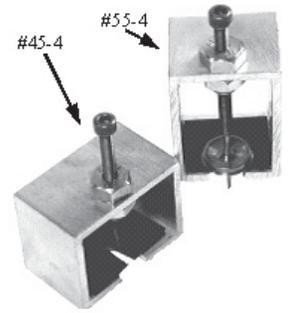


RIVETER table advancing knob detail

Above: RIVETER installed on the SENSIPRESS+ (embossing tooling not shown installed). Also showing new tool storage arrangement on top for even easier working.

45-4 THE PULLER \$24.95

An economical rigid, precision tool for removing wheels, drivers, and gears from axles and shafts. Designed for HO scale modeling, but handles larger and smaller scales as well. Suitable for work in 'N' scale modeling with aid of #4540-6 Professional Precision PressTool set. Capacity: axles/shafts from 1/16" to 1/8"; Drivers, wheels, gears up to 1-5/8" O.D.; maximum press depth: 1". Includes: allen wrench; 1/16" tip press screw; 3/32" tip press screw; 'V' plate; operating suggestions.



55-4 THE PULLER II \$24.95

Same as above except: accepts drivers, wheels, gears up to 1" O.D.; max. press depth: 1-1/2". Puller Accessories

- 4507-4 \$2.25 Steel V Plate For Puller 45-4
- 4510-4 \$2.25 Steel V Plate For Puller 55-4
- 4529-4 \$1.95 "Tombstone", pointed axle press tool
- 4531-4 \$6.95 1/16" Tip Puller Press Thumbscrew
- 4532-4 \$6.95 3/32" Tip Puller Press Thumbscrew
- 4533-4 \$6.95 Cone Tip Puller Press Thumbscrew
- 4534-4 \$6.95 Flat Tip Puller Press Thumbscrew
- 4535-4 \$6.95 Bored 3/32" end Puller Press Thumbscrew
- 4536-4 \$6.95 Bored 1/16" end Puller Press Thumbscrew

Precision Press Tool Accessories

Expands the usability and work quality of the PULLER and PULLER II tools by eliminating the "twist pull" problems (mis-alignment and work surface marring) while providing the capability to press smaller shaft sizes found more commonly in recently manufactured miniature models. These sets are closely sized for specific shaft size to be pressed in order to permit pressing small sizes yet minimize tool damage/breakage. Each size-set contains one tool with short press pin (for starting the sometimes difficult press-out) and one tool with long press pin (for completing removal of shaft once it has been broken loose). Dimension indicates minimum shaft size the tool can press out.

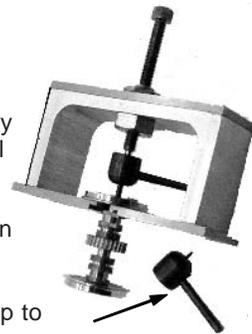


- 4539-4 \$49.95 Full set of 8 pieces;short pin and long pin in all 4 sizes—1.0, 1.2, 1.5 (1/16"), 2.4mm (3/32")
- 4540-4 \$12.95 1.0mm press pin, set
- 4542-4 \$12.95 1.2mm press pin, set
- 4544-4 \$12.95 1/16" - 1.5mm press pin, set
- 4546-4 \$12.95 3/32" - 2.4mm press pin, set

65-4 THE PULLER III \$56.95

(illustrated with P:48 driverset and using the optional #4546-4 Professional Puller to eliminate turning action and minimize work marring)

A large, heavy duty, precision machined PULLER with tool steel reinforcement and puller plate for those heavy duty and larger scale jobs found in O scale and Large Scale modeling work. Economical rigid, precision tool for removing wheels, drivers, and gears from axles and shafts. Designed for O scale modeling, but handles larger and smaller scales as well. Works on principal of pressing shaft out of the gear, wheel, etc. Capacity: axles/shafts from 3/32" to 1/4"; Drivers, wheels, gears up to 2-1/4" O.D.; maximum press depth: 1". Includes: allen wrench; 3/32" tip press screw; 1/4" puller plate (removable); operating suggestions.



- 6511-4 \$1.95 5/8"- 16mm Puller Plate - Permits insertion clearance for wheelsets with gear or bearing up to 5/8" to permit pressing axle from wheels larger than 5/8" diameter.

75-4 PULLER V \$44.95 for tinplate 3 rail conversion jobs, etc.

A finger style, heavy duty, precision machined PULLER with tool steel adjustable fingers to fit in minimum clearance jobs (fingers can be ground or filed thinner if necessary). Designed for O scale tinplate 3 rail conversion wheel removal jobs, but handles larger and smaller scales as well. Replaceable parts available when an extremely tight part breaks a tool part.

Capacity: axles/shafts from 3/32" (2.4mm) to 1/4" (6mm); Drivers, wheels, gears up to 1-1/2" (38mm) O.D.; maximum press depth: 1/2" (1" with optional 'fingers').

Includes: allen wrench; 3/32" tip press screw; #4556-4 Professional Press tool; operating suggestions (wheelset NOT included).



The Aligner

designed by Dave Brown

THE ALIGNER: \$15.95 ea

31-4 fits 2.0mm shafts/axles

32-4 fits 2.4mm and 3/32" shafts/axles

33-4 fits 3.0mm (.118") shafts/axles

38-4 fits 1/8" shafts/axles

(recent HO, HOn3 cars, locos)

(small HO, HOn3 cars, locos)

(most import HO locomotives)

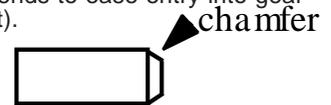
(most USA made HO locomotives)

A Gear truing tool designed to help check and minimize the gear wobble which often occurs when installing gears on axles and shafts. Such wobble causes binding, noise and early failure in gear boxes as the gear 'moves' laterally back and forth during its rotation. It seems that no matter how careful one is when assembling gears or wheels to an axle or shaft, not infrequently the parts will not be perpendicular. While this tool can usually "save" you in such occurrence, you are still cautioned to use all reasonable care to attain perpendicularity in the first place, using this tool finally to assure exact perpendicularity when you have completed your usual assembly procedure.

USAGE INSTRUCTIONS

1. Remove wheels from shaft as necessary using **NWSL PULLER, THE SENSIPRESS+** or similar.
2. Note correct position of the existing gear in relation to the ends of its shaft/axle.
3. Remove the existing gear using **THE PULLER, THE SENSIPRESS+**, or similar.
4. Carefully inspect the shaft ends for smooth and true chamfer (a taper or rounding of axle/shaft ends to ease entry into gear bore and minimize creation of burrs as a part is pressed onto a shaft - exaggerated in illus. at right).

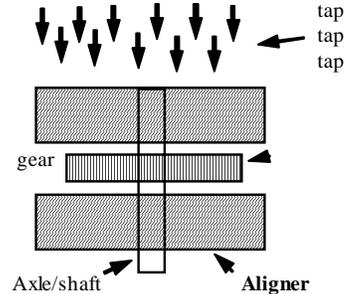
The best way to chamfer a shaft is to turn it in a lathe, drillpress, motor hand tool, or similar and carefully dress the end of the shaft with a file as it is rapidly turning. A satisfactory chamfer can often also be made using a file and hand turning the shaft making sure that all of the rough edges are removed.



5. Place the center hole of the new gear to be installed over the top of the larger (off-center) hole in one of the two halves of **THE ALIGNER**.

6. Put one end of the axle into the gear as perpendicularly as possible and press the shaft into the gear as follows:

- a) Use an arbor press such as **THE NWSL SENSIPRESS+**.
- b) Use the spindle on a drill press.
- c) Use **THE PULLER** (while this can be done, extreme care must be taken to maintain perpendicular alignment as the press screw turns).
- d) Use a bench vice.
- e) Use a small, preferably brass tipped, hammer to gently tap the shaft into the gear.

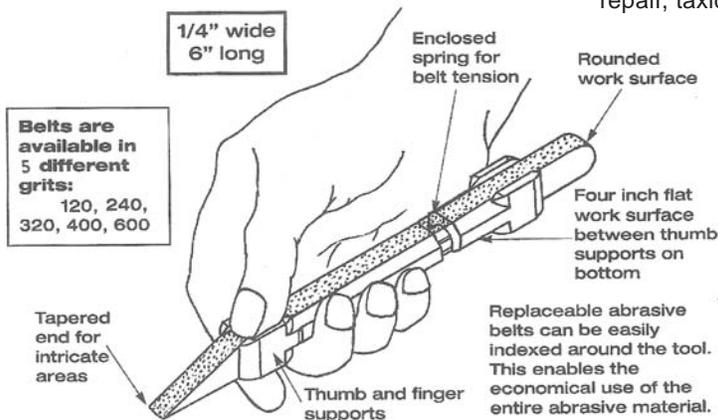


7. Locate the gear on the shaft as noted in instruction 2 above.

8. Now place the axle with the new gear into the center hole of one half of the **ALIGNER** tool. Place the center hole of the second half of **THE ALIGNER** on the opposite end of the axle (thus sandwiching the gear between the two halves of **THE ALIGNER**). With a small (preferably brass, plastic or rubber tipped) hammer, tap the top side of **THE ALIGNER** tool several times in a circular pattern. This action will seat the gear perpendicularly on the axle thus assuring its proper alignment. Inspect by holding one half of **THE ALIGNER** tool (while turning the shaft and gear in it) toward a light source. Note that if a soft hammer (as above) is not available, a normal steel hammer can be used but it may cause damage to **THE ALIGNER** tool. If such damage is always confined to one side only of each half of the tool, no loss of accuracy should occur.

DETAIL SANDER with replaceable belts

Ideal for: Metal finishing, woodworking, ceramics, electronics, pattern making, welding cleanup, auto body finishing, mold finishing, jewellery making, gun repair, taxidermy, and much more!



	Color	Sanding	Extra
<u>Grit</u>	<u>Code</u>	<u>STICK \$3.95</u>	<u>BELTS (2) \$2.45</u>
120	RED	2501-9	2806-9
240	BLUE	2502-9	2807-9
320	GREEN	2503-9	2808-9
400	YELLOW	2504-9	2809-9
600	BLACK	2505-9	2810-9

44-4 QUARTERER HO-S-On3 \$39.95

The Larry Richards economy precision tool for quartering steam

Quartering is the term for setting crankpins of locomotive drivers at 90 degrees 'crank' apart (similar to an automobile crankshaft). Accurate quarter of all drivers in a set to the same angle (whether exactly 90 degrees or not) is critical for smooth operation of model locomotives.

This tool enables quick, accurate quartering of drivers up to 1" O.D. on 1/8" or 3mm axles. The wheel is located onto the axle while the wheelset is securely held in the tool avoiding possibility of slippage. Can also be used to compare quarter of existing driver sets.

A .100" clearance is required on each side of the gear. Will not fit drivers with gears wider than 1/8" (most drivers have narrower gears). Will not fit most Rivarossi drivers due to inconsistent axle diameters. Operating suggestions included. Designed by Larry Richards for your modeling pleasure.

#4704-4 Indexpin 0-80 & 1/16-60W, each \$1.95

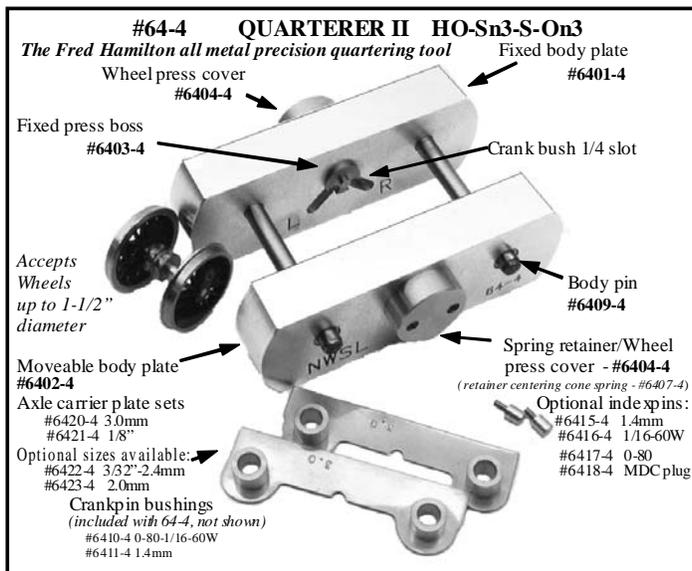
#4711-4 Assembly 'Stud', each \$1.95



Shown above with Indexpin #4704-4 (included)

64-4 QUARTERER II \$140.95

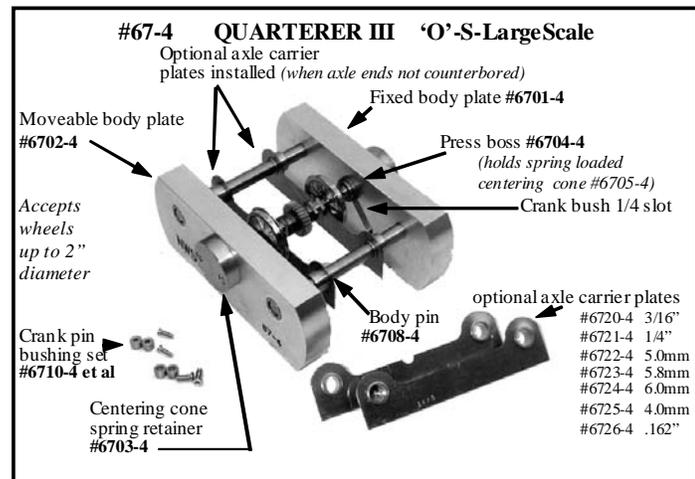
Offers precision in quartering model railroad steam locomotive drivers up to 1-1/2" (39mm) diameter (120" in HO scale, 90" in S scale, 65" in O scale). Minimum crank throw (distance from axle center to crankpin center) is 0.150" (3.81mm).



67-4 QUARTERER III \$185.95

Offers precision in quartering model railroad steam locomotive drivers up to 2" (50mm) diameter (90" in O scale, 55" in Large Scale) with axles up to 1/4" in diameter (see #64-4 for smaller drivers such as HO and small 'S'). Minimum crank throw (distance from axle center to crankpin center) is .260" (6.6mm). This accurate but rugged tool is usable in nearly all applications since it is designed to work on the outside of the driver set. Because of this, large axle bearings, stepped axles, or large axle gears do not hamper the HP Quarterer in accurately quartering drivers.

The crankpin bushings provided will fit driver crankpin screws of 2.0mm and 2.6mm thread OD. These two sizes seem to cover most available O scale drivers. Custom-made crankpin bushings are available direct from NWSL for any other size.



48-4 THE BENDER \$49.95

A miniature press bending brake to bend brass, styrene or similar light sheet materials used in model building up to 90 degrees (depending on how far you tighten the press screws). Up to 3" bend length (exact usable length depends on material hardness and your strength) of up to .020" half hard brass. Adjustable depth guide permits easy, quick duplication of bend placement. Includes reversible steel die, optional urethane die material (permits bends without marring material surface) and operating suggestions. Compact size: 4" x 1-1/2" x 3-1/2" height

Non scratch die material: 4815-4 2.50Urethane Die (3 pcs)

Prices subject to change without notice.



NWSL Sherline Lathe Package

Part #76-4

A specific package co-developed by NWSL and Sherline featuring maximum productivity at minimal entry cost.



The Basic Lathe (#4500) and included accessories.

NorthWest Short Line owns, and uses daily, several Sherline miniature metal working machines. Almost all “one-off” parts (small runs of custom axles, bearings, etc.) are made using Sherline equipment. NWSL’s overhead is increasing to a point where we can no longer take on much of this kind of work, and what we’d like to see is a return to the days where a modeler can make his own parts if need be, and not be a slave to mass-production products that offer few or no options.

Sherline products are made in California, and have been since 1974. The basic design of their product has not changed, meaning you’re not going to get stuck with last year’s model that is no longer supported, nor are you at the mercy of some importer who may or may not still be importing that “bargain”

machine for which they may or may not have spare parts. Sherline answers the phone. Sherline knows their products inside and out. Sherline has spare parts. Best of all, Sherline products run true, right out of the box.

“The bitterness of low quality is remembered long after the sweetness of low price is forgotten.”

Sherline also has a huge website because they make an epic line of accessories for their machines, and for the first time visitor to their site it can be an overwhelming barrier to entry. What NWSL has done here is turn back to the clock to the days when we bought our first machines, with the exception that 15+ years later we no longer wonder what to order or what accessories we might need. The package selected here is exactly what we wished we’d ordered then because it contains the basic set of accessories that we use to do the majority of the work. Sure, you can and probably will need more over time, but this package—literally born out of what we use to earn a living—will get you off to a great start. (Oh, and if you ever want to step up to CNC, you can add steppers and a computer to this machine with no other changes needed.)

Handwheel: You have to use your imagination for this one. This is a zero adjustable handwheel, and upgrade over the handwheels you see in the lathe photo. (These come installed on your upgraded lathe.) What’s the difference? You absolutely need those little numbers to measure cutting distance; any lathe is going to have that. What makes these essential is the small black knob near the center of the wheel; with it you can move the cutter to where you want to start, and then turn just the numbered wheel (without moving the cutters or work piece) to get the zero position where you want it. Trust us on this one—you want this.



Handwheel

Rocker Tool Post and Height Gauge: Regular tool holders come with a rectangular slot into which you secure the cutting tool (via the top screw) but the gotcha here is that the tip of the tool has to be adjusted to the center of the work piece. By default it’s fairly close, but as you’d see with the 3009 height gauge it’s usually off a little bit. What do you do? You start adding shims, and although that works it’s a pain in the ass, and if you have to change out tools then you have to re-shim everything again. Not so with the rocker tool post! Insert the tool, get it close to where you want it, get the height gauge ready, and you’ll have that tool dead-on and ready to cut in no time.



Rocker Tool Post (#3057)



Height Gauge (#3009)

Cutting Tools (set of 3): Your lathe won’t cut squat without cutting tools and here’s a few to get you going. These are HSS (High Speed Steel), a tough grade of steel that does an excellent job on most of the material you’ll be cutting (regular steel, brass, aluminum, etc.) There are a lot of cutting tools out there, including carbide tipped and other things, but HSS is your best bet because they are inexpensive and because you can sharpen them yourself. (And, you don’t have to shim the damn things...aren’t you glad you got the rocker tool post?)



Cutting Tools (#3006)

3-Jaw Chuck: You can't cut something unless you can hold it, and if there's a "must-have" accessory for any lathe it is a 3-jaw chuck. It's not part of the basic lathe because it alone retails for \$100, but it's a staple in the package because you'll need it right away. This chuck screws on to the headstock, and then you use the two "Tommy Bars" (that's what Sherline calls them; everyone else on Planet Earth calls them "chopsticks") in the two holes shown in the photo to simultaneously open or close all three jaws at once.



3-Jaw Chuck (#1041)

Drill Chuck Set: OK, so you have a nice stick of brass chucked up in the 3-jaw chuck, and you need to drill a hole in the end. Simplified (you do need to follow a few steps to do it right) you insert this drill chuck into the tailstock, chuck up a drill bit, bring the tailstock close to the work piece, start the work piece spinning, then turn the tailstock handcrank to move the drill bit into the rotating work piece. (You're likely familiar with a drill press, where you lower a spinning chuck with bit onto the work piece. It's exactly the opposite on a lathe; the chuck is stationary and the work piece rotates.



Drill Chuck Set (#1072)

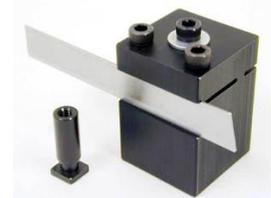
Two other things you can do with this setup. You can remove the 3-jaw chuck, insert the long bolt pictured above, and then put the drill press where the 3-jaw chuck was on the headstock. You can now chuck up a drill and overcome any drill press withdrawals by having a spinning drill bit to work with (you'd secure the piece to be drilled on the cross-slide) or more commonly you can use this as a "micro 3-jaw chuck" of sorts to chuck up very small diameter stock.

Center Drill Set: Let's back up a bit on the whole drilling thing; you may or may not have seen these before but you will need them. They are called center drills, and they exist to help you start an accurate hole in the work piece. Why not just use a drill bit? Except for very large drill bits, most bits tend to "walk" a little before they bite into the work piece and start to make the hole. To eliminate this, you instead start with a center drill (choosing an appropriate diameter) and because these babies do not flex you bring the center drill to bear on the work piece—it isn't going to walk anywhere. Start the hole (doesn't need to be very deep) then remove the center drill and put in the desired drill bit. Because the drill bit now has a place to go, it won't walk and you can drill the desired hole.



Center Drill Set (#3021)

Cut Off Tool : OK, so you've chucked up a piece of brass rod, used a cutting tool in your rocking tool post to reduce the outside diameter to where you want it, then used a center drill followed by a regular drill to drill a hole in the end. Sounds like you're making a bearing...great! Only, what do you do next? How are you going to get that bearing off the rod, ideally with a nice clean cut and exactly to length? With a cutoff tool, pictured right, and the last piece in the NWSL edition of the Sherline lathe.



Cut Off Tool (#3018)

A cutoff tool is a one-trick pony: You get the blade perpendicular to the work piece (the brass rod in this case), and then you start moving the cutoff blade into the work piece and the cutter will start to cut a nice, clean groove. You definitely want some cutting fluid for this operation because there's a tremendous amount of friction, so as you send the cutter farther and farther into the work piece you keep dripping some cutting fluid in the slot to keep the tool cool and lubricated. When the tool reaches the center, your part falls off and you've got a nice clean face on the brass rod to start the next piece. (What's that? It left a little dimple in the center? That means the cutoff tool isn't set to exact center. Aren't you glad you have a height gauge to tweak that?)

One thing to mention about this particular cutoff tool is that it's slightly different than what you might be familiar with. Most cutoff tools mount on the front (between you and the work piece) and you send the cutoff tool forward to do the job. Sherline does make one of those, but we like this variant better. What's the difference? This is a rear cutoff tool, and you mount it behind the work piece and bring the cutter in toward you. Why is that better? It makes a difference on a Sherline because that cutoff blade is kind of thin; good because it doesn't waste a lot of material but potentially challenging because it might flex a little. We've found that the rear cutoff version is less likely to flex, and another bonus is that you can often leave it set up while you use regular cutting tools in the front, saving you some tool changing time. (Remember, the cutoff tool needs to be square, so it's worth taking some time and using a small machinist's square to get it right.)

How much for all this stuff? Priced individually, all this totals up to \$932, FOB California. However, Sherline was kind enough to give us a package deal break, so SRP for the NWSL edition Sherline lathe is \$870, FOB California. (Ships UPS ground, weighs about 35 pounds.)

Ouch? We don't think so, and here's why. Take a few bearings to a local machine shop—if you even have a local machine shop anymore—and ask them what it would cost to have say ten of them made. Hmm... maybe it isn't so "ouch" after all. Are you a club member or part of a group layout? It's almost a given that someone needs something, can't find it commercially, and has no idea how to get one. What's that? You have a lathe? Mister, I will *pay you* to make that part for me. (Be sure and emphasize this point with your wife.)

Don't be lulled by tempting imports in glossy catalogs. Sherline has a craftsmanship museum (and WOW are those projects good!) Tooling and accessories? Visit www.sherline.com and prepare to be overwhelmed. Support? Sherline handles that directly, and it's fantastic. There's even a Yahoo! Groups forum dedicated to Sherline. You get what you pay for, and we really hope you've figured that out by now.

Go for it. Call NWSL at 406-375-7555, and say you want to talk to Dave about a Sherline. He'll likely crumble like a cheap imported casting and throw in some goodies to sweeten the pot even further. The West needs the skills; you and your friends need the parts.

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