

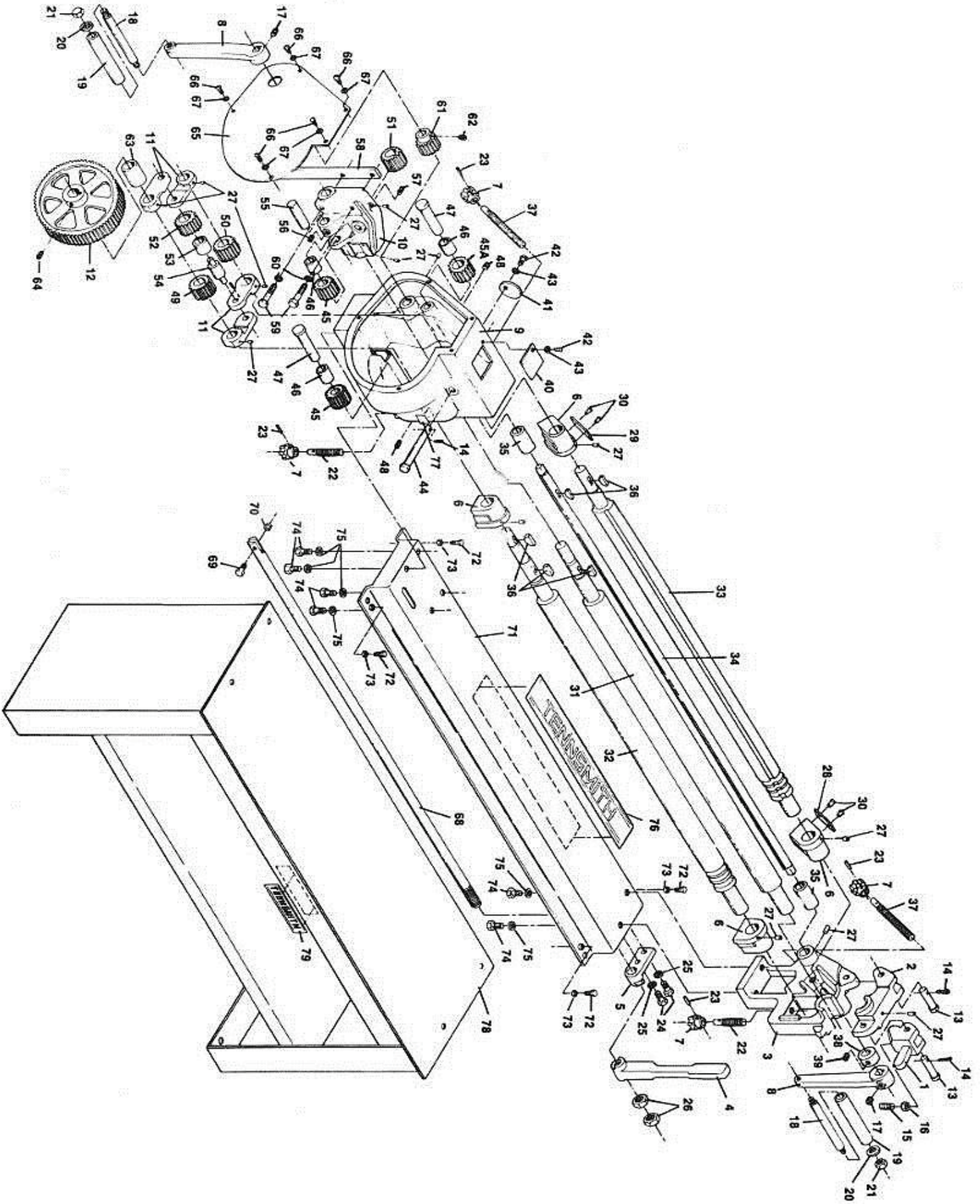


Model SR48 Shown with Optional Stand

Models SR48 Slip Roll Operation, Parts and Maintenance Manual

Model:	Purchased From:
Serial #:	Date Received:

USA  MADE



SR48 / Parts List

PART #	DESCRIPTION	REQ'D #	PART #	DESCRIPTION	REQ'D #
SR48-401	LOCK, TOP LATCH	1	SR48-441	COVER PLATE, TOP R.H. HOUSING	1
SR48-402	TOP LATCH	1	SR48-442	SCREW, COVER PLATE	2
SR48-403	RIGHT HAND SIDE FRAME	1	SR48-443	WASHER, SCREW LOCK	2
SR48-404	LIFT HANDLE	1	SR48-444	PIN, SWIVEL BLOCK	1
SR48-405	LIFT CAM	1	SR48-445	IDLER GEAR-16T	3
SR48-406	BLOCK, ROLL ADJ.	4	SR48-445A	IDLER GEAR-18T	1
SR48-407	HANDKNOB, ROLL ADJ.	4	SR48-446	BUSHING, IDLER GEAR	3
SR48-408	HANDCRANK	2	SR48-447	PIN, IDLER GEAR	2
SR48-409	LEFT HAND HOUSING	1	SR48-448	SET SCREW, IDLER PIN	2
SR48-410	BLOCK, TOP ROLL SWIVEL	1	SR48-449	GEAR, LOWER FRONT ROLL	1
SR48-411	LINKS	4	SR48-450	GEAR, BACK ROLL	1
SR48-412	12" GEAR	1	SR48-451	GEAR, TOP ROLL	1
SR48-413	CLEVIS PIN, TOP LATCH	2	SR48-452	GEAR, LOWER IDLER	1
SR48-414	COTTER PIN	3	SR48-453	BUSHING, LOWER IDLER GEAR	1
SR48-415	SET SCREW, LOCK	1	SR48-454	SPACER PIN, GEAR	1
SR48-416	NUT, SET SCREW LOCK	1	SR48-455	PIN, SWIVEL BLOCK IDLER	1
SR48-417	SET SCREW, HANDCRANK	2	SR48-456	SET SCREW, PIN	1
SR48-418	SHAFT, HANDCRANK	2	SR48-457	SCREW, SWIVEL BLOCK	1
SR48-419	HANDLE, HANDCRANK	2	SR48-458	LEVER, LIFTING	1
SR-48-420	WASHER, HANDLE	2	SR48-459	SCREW, LIFTING LEVER	2
SR48-421	NUT, HANDLE LOCK	2	SR48-460	WASHER, SCREW LOCK	2
SR48-422	SCREW, LOWER ROLL ADJ.	2	SR48-461	GEAR, CRANK SHAFT	1
SR48-423	SPLIT PIN, ROLL ADJ. HANDKNOB	4	SR48-462	SET SCREW, GEAR	1
SR48-424	SCREW, LIFT CAM	2	SR48-463	SPACER	1
SR48-425	WASHER, LIFT CAM SCREW LOCK	2	SR48-464	SET SCREW, 12" GEAR	1
SR48-426	NUT, LIFT HANDLE LOCK	2	SR48-465	COVER	1
SR48-427	GREASE FITTING	13	SR48-466	SCREW, COVER	5
SR48-428	SCALE, RIGHT HAND	1	SR48-467	WASHER, SCREW LOCK	5
SR48-429	SCALE, LEFT HAND	1	SR48-468	ROD, LIFTING	1
SR48-430	DRIVE SCREW, SCALE	4	SR48-469	SCREW, LIFTING ROD	1
SR48-431	ROLL, TOP	1	SR48-470	NUT, SCREW LOCK	1
SR48-432	ROLL, LOWER FRONT	1	SR48-471	BASE	1
SR48-433	ROLL, BACK	1	SR48-472	SCREW, BASE LEVELING	4
SR48-434	SHAFT, CRANK	1	SR48-473	NUT, SCREW LOCK	4
SR48-435	BUSHING, CRANK SHAFT	2	SR48-474	SCREW, MOUNTING	6
SR48-436	WOODRUFF KEY	5	SR48-475	WASHER, SCREW LOCK	6
SR48-437	SCREW, BACK ROLL ADJ.	2	SR48-476	DECAL, BASE	1
SR48-438	COLLAR, CRANK SHAFT RETAINING	1	SR48-477	SERIAL PLATE	1
SR48-439	SET SCREW, COLLAR	1	SR48-478	STAND, OPTIONAL	1
SR48-440	COVER PLATE, TOP L.H. HOUSING	1	SR48-479	DECAL, STAND	1

FORWARD

This manual has been prepared for the owner and operators of the TENNSMITH Model SR48 Slip Roll. Its purpose, aside from operational instructions, is to promote safety through the use of accepted operating procedures. Read all instructions thoroughly before operating the slip roll.

Also contained in this manual is the parts list for your slip roll. It is recommended that only TENNSMITH or factory authorized parts be used for replacement parts.

3-YEAR LIMITED WARRANTY


TENNSMITH machinery and component parts are carefully inspected at various stages of production and are tested and inspected prior to shipment. We agree that for a period of twelve (12) months from the date of delivery from our authorized distributor to replace, at our option, any machine (or component part thereof) proving defective within the above period. Additionally, we agree that for a period of thirty-six (36) months from date of delivery to replace component parts proving defective within the stated period. All warranty claims are made F.O.B. our plant, providing such machine (or component part) is returned freight prepaid to our plant, or a designated service center of the undersigned, for our examination. This warranty does not include repair or replacement required because of misuse, abuse, or because of normal wear and tear; or electrical components which are warranty by their manufacturer. Further, we cannot be responsible for the cost of repairs made or attempted outside our factory or designated service center without our authorization. No claims for defects will be honored if the name and data plate has been removed. This warranty is made expressly in place of all other warranties or guarantees express or implied, with respect to fitness, merchantability, quality or operative ness. This warranty becomes effective only when the accompanying warranty card is fully and properly filled out returned to the factory within ten (10) days from date of delivery.

SAFETY PRECAUTIONS

1. Know the safety and operating instructions contained in this manual. Become familiar with and understand the limitations of this slip roll. Always practice safety.
2. Wear protective foot wear or safety shoes. Jewelry such as rings and watches should be removed when operating the machine.
3. Rolls should be securely bolted to a work table or bench. The bench should be bolted to the floor.
4. Always keep hands clear of entry area to rolls while operating.
5. Do not misuse the slip rolls by using them for other than their intended use.
6. Keep the work area clear and clean to avoid tripping or slipping.
7. Remove the second crank handle when only one person is operating the machine.

THESE INSTRUCTIONS MUST BE FOLLOWED OR SERIOUS INJURY OR PROPERTY DAMAGE COULD OCCUR.



	 WARNING
	Pinch Point Hazard Keep hands clear of rollers. Read instruction and safety information prior to operation.

SAFETY INSTRUCTIONS
<ol style="list-style-type: none">1. Read and understand instruction manual before, operating, servicing, or maintenance of machine.2. Keep hands and fingers clear of forming rolls.3. Do not wear loose clothing near rolls.4. Provide all proper protective devices and guards that may be necessary or advisable for any particular use, operation, set-up, or service.5. Report any equipment malfunction to your supervisor.6. DO NOT REMOVE THIS INSTRUCTION SIGN.



RECEIVING THE MACHINE

Remove the slip roll from its crate and inspect the unit for damage. Any loss or damage should be noted in detail on the delivery receipt and reported to your distributor immediately.

INSTALLING THE MACHINE

Locate the slip roll in a well lighted area on a solid, level floor. The slip roll must be securely bolted to a work bench or TENNSMITH manufactured optional stand.

Caution: The Model SR48 slip roll weighs nearly 800 lbs. A heavy-duty work bench is required to support this weight. The work bench or stand must be securely mounted to the floor. NOTE: The slip roll should be positioned on the work bench so that both crank handles rotate freely without meeting any obstructions.

Use lag screws or bolts with expandable shields or similar holding devices thru the mounting feet located on the bottom of the side panels to mount work bench to floor.

The Model SR48 slip roll is equipped with four leveling screws (#72) and lock nuts (#73) to permit the leveling of the machine on the work bench, thereby eliminating any binding of the various gears or bearing. Use these leveling screws to remove any twist in the roll base (#71). If the slip roll is mounted on a wood topped bench use metal plates (not provided) under each leveling screw.

OPERATING THE MACHINE

The full-length capacity of the Model SR48 is shown in the chart below.

The chart (Figure 1) should be used as an approximate material conversion comparison to show equivalent capacities of material other than mild steel. Do not exceed the capacity of your slip roll as permanent damage to the machine may result.

Figure 1

MAXIMUM CAPACITIES	SR48
Mild Steel	16 ga / .063
Stainless Steel	20 ga / .036
Cold Roll Steel	16 ga / .063
Aluminum, Soft	.120
Aluminum, Hard	.063
Brass, Soft Yellow	.075
Bronze, Phosphor Annealed	.075
Copper, Soft	.120
Copper, Hard	.075

The exact capacity of your slip roll depends on several factors including the nature and uniformity of the material being worked, the length and diameter of the cylinder or curved part being formed, and the number of passes through the rolls to obtain the desired diameter of cylinder or radius of bend. As a general rule, when your slip roll is overloaded there will be deflection at the center of the rolls resulting in a cylinder or curved part that is bulged in the center. The deflection can be minimized by progressively forming the work piece to the desired radius by making two or more passes through the rolls. DO NOT try to force the material through the machine as an unsatisfactory work piece and possible damage to the machine will result.

The two front rolls (#31, #32) feed the material through the machine as the right hand crank handle (#8) is turned in a clockwise direction. For forming capacity materials an additional left hand crank handle (#8) is provided for two person operation if necessary. NOTE: if the machine is being operated by only one person, the left hand crank handle should be removed from the machine for safety. The pinch roll adjustment screws (#22) up and down for a different gauge material clearance between the two front rolls. The gap between the two front rolls should be equal at both ends of the rolls to insure an even advancement of the material being worked.

The rear roll (#33) adjust to control the radius of bend of the material being worked by means of the back roll adjustment screws (#37). The gap between the rear roll and two front rolls should be equal at both ends of the roll to insure an equal radius at both ends of the material being worked. The scales (#28, #29) mounted at each side frame are helpful in maintaining an equal gap. The scales can also be used to record approximate rear roll settings for forming a particular radius in a particular gauge of material. The rear roll features three full length longitudinal grooves which assist in starting the work piece through the rolls.

The Model SR48 is an "initial pinch" type slip roll. One forming problem often encountered with any initial pinch type roll is a small flat spot on the leading edge of the sheet of material being worked. This problem can be minimized by a pre-bending operation prior to running the work piece through the rolls. With the machine in a non-rotating condition insert the work piece between the upper and lower rolls (#31, #32) and advance the material slightly by means of the crank handle(s) to the point where the work piece is held in place between the rolls. Bend the work piece by hand upwards and slightly around the upper roll approximating the bend radius desired in the finished piece. Crank the work piece through the machine. This pre-bending operation is also useful in reducing the number of rear roll (#39) adjustments required to form smaller radii in capacity materials.

Once the material being worked has been formed to the desired shape, removal is accomplished by raising the latch assembly (#1, #2) to its fully open resting position, and elevating the top roll (#31) by means of the roll lift handle (#4). The degree of roll lift can be adjusted by moving the handle (#26) in the desired location. The latch pressure can be adjusted by tightening or loosening the top latch set screw (#15) and locking the bolt in place by tightening the top latch nut (#16).

Wire grooves, 3/8", 1/2" and 5/8" are provided on the right hand end of the rolls for rolling cylinders with wired edges.

MAINTENANCE

All roll and gear bearing surfaces are equipped with standard grease fittings (#27). Some of these grease fittings are only accessible by removing the top cover plate (#40) and the rear cover plate (#41). These areas should be lubricated using a grease gun once each week. We recommend a good of industrial lubricating grease.

After every thirty days of operation, apply grease to the gears (#12, 45, 45A, 50, 51, 52 and #62)) by removing the top cover plate and main housing end plate. Inspect all bolts and set screws on a regular basis to insure that they are secure.

We recommend that the rolls be lightly oiled when not in use to prevent rusting.

ORDERING PARTS

When ordering parts please furnish the model number and the serial number of your machine.



Slip Roll Specification

Model	SR48
Maximum capacity, mild steel	16 ga / 1,6 mm
Maximum Forming Length	49 in / 1244 mm
Diameter of Rolls	3 in / 0.76 mm
Minimum Forming Radius	1 1/2 in / 0.38 mm
Wire Grooves	3/8, 1/2, 5/8 in 9.5, 12.7 , 15.8 mm
Gearing Ratio	4 : 1
Shipping Weight	1100 lbs / 500 kg



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