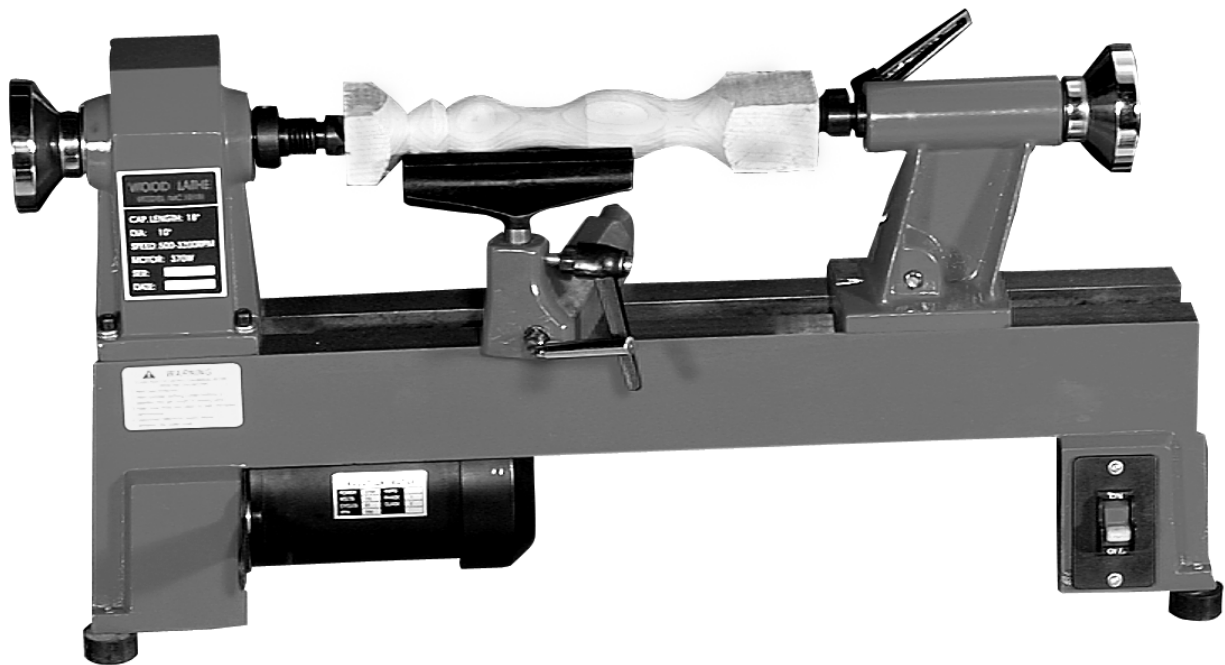


# TurncrafterPro™ Lathe

## User's Manual

*Read this manual completely before usage.*



**Model #TCLPRO**



Turn up to 39" with the **#TCLPROXB**  
extension bed.(not included)

**PSI** Woodworking  
PRODUCTS

9900 Global Rd.  
Philadelphia ,PA. 19115

Version 2 – 03/05

# SPECIFICATIONS OF TURNCRAFTERPRO™ MIDI LATHE

Model number: ..... **#TCLPRO**  
Motor: ..... 1/2 HP, 120V AC, 8A  
Distance between centers: ..... 18"  
Distance between centers with extension bed: ..... 39"  
Swing over bed: ..... 10"  
Head stock spindle thread: ..... 1" x 8tpi  
Hollow head stock ..... #2 morse taper  
Hollow tail stock ..... #2 morse taper  
5 (five) speed: ..... 500 to 3200 RPM  
Overall Size: ..... 30"L x 7-1/4" W x 14-1/2"H  
Overall Size with extension bed: ..... 54"L x 7-1/4" W x 14-1/2"H  
Net weight (lathe only): ..... 68 lbs.  
Net weight with extension bed: ..... 87 lbs.

## WARRANTY

THE TURNCRAFTERPRO™ LATHE IS WARRANTED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF THREE (3) YEARS FROM THE DATE OF PURCHASE. THIS WARRANTY APPLIES TO THE PURCHASER OF THIS PRODUCT, AND IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT OR ITS PARTS AT PSI WOODWORKING PRODUCTS' DISCRETION. EXCLUDED ARE PARTS WHICH HAVE BEEN MISUSED, ABUSED, ALTERED OR CONSUMED BY NORMAL OPERATION OF THE MACHINE. ALSO EXCLUDED ARE DIRECT OR CONSEQUENTIAL DAMAGES TO PERSONS, PROPERTY, AND/OR MATERIALS. YOUR INVOICE SERVES AS PROOF OF PURCHASE AND MUST BE REFERENCED PRIOR TO RETURN AUTHORIZATION.

\_\_\_\_\_  
DATE PURCHASED

\_\_\_\_\_  
INVOICE NO.

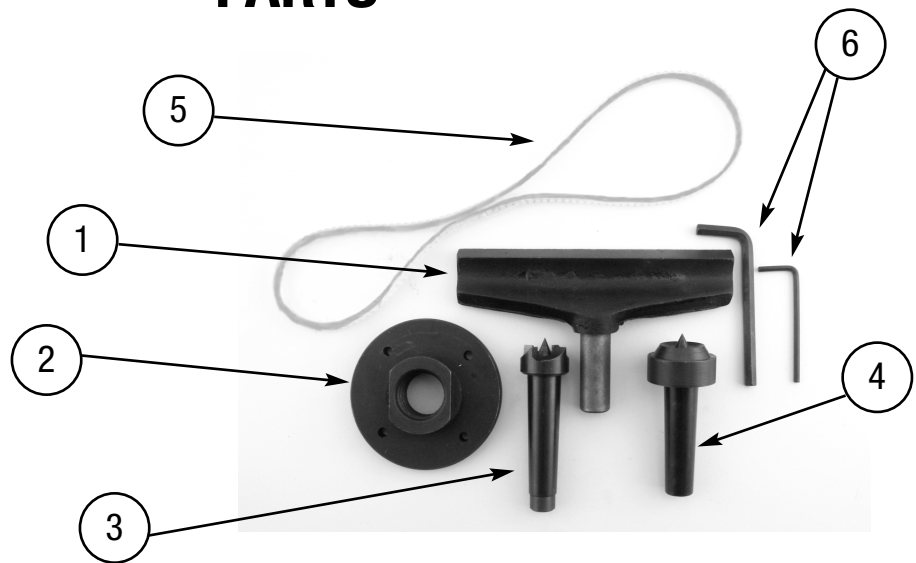
# SAFETY INSTRUCTIONS

1. Read and understand instruction manual.
2. **NEVER** connect plug to power source until full assembly steps have been completed.
3. Check that your supply voltage and grounding are correct.
4. Do not use the lathe in a damp or wet location.
5. Keep lathe clean and lightly oiled.
6. Make sure the belt and pulley are adequately guarded at all times.
7. Always remove any tools, chuck keys, toggle bars, etc. when you are finished with them.
8. Keep the work area well lit and provide adequate ventilation and workspace.
9. Keep young children and bystanders at a safe distance from the lathe.
10. Do not force the lathe to do more than what it is designed to do.
11. Do not wear loose clothing, jewelry, or neckties which could get caught in revolving parts. It is recommended that long hair be restrained.
12. Safety eye wear should be worn at all times. Also, it is recommended to a use of face or dust mask during lathe operation.
13. Attach all workpieces securely to the lathe, whether between centers, on face plates, or in chucks, etc.
14. For best results be sure to keep tools sharp, clean, and free from rust.
15. Use only three wire extension cords that have 3-prong grounding type plugs and 3-hole receptacles that accept the tool's plug.
16. Check the speed **BEFORE** mounting any material onto the lathe. **ALWAYS** start the lathe at a slow speed.
17. Keep the door to the pulleys and belts securely screwed closed during lathe operation.

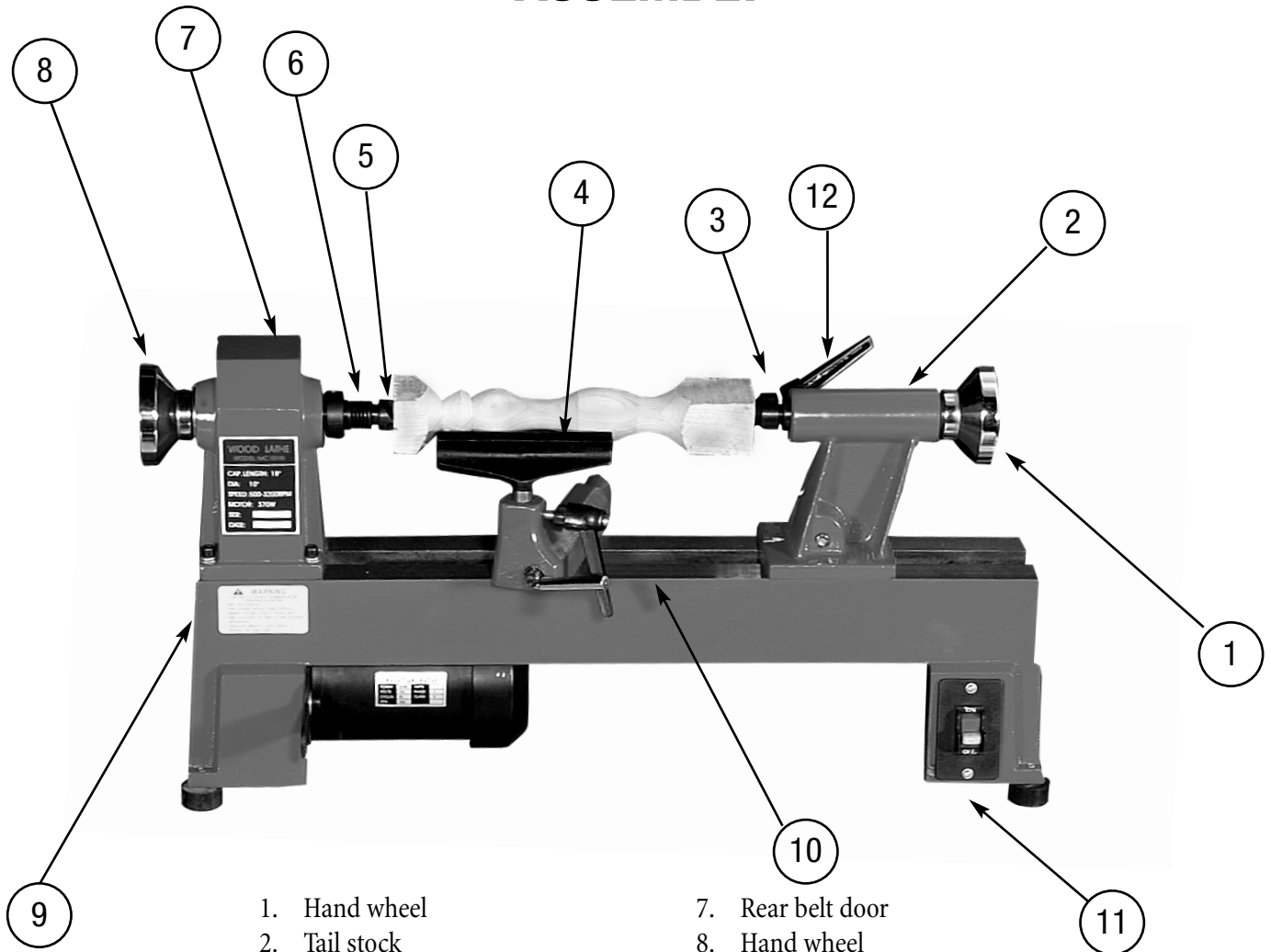
# PARTS

## Package Includes

1. 6" Toolrest
2. 3" Faceplate
3. #2 MT spur center
4. #2 MT live tail
5. Spare drive belt
6. 2 Hex wrenches



# ASSEMBLY



1. Hand wheel
2. Tail stock
3. Live center
4. Tool rest
5. Spur center
6. Headstock spindle

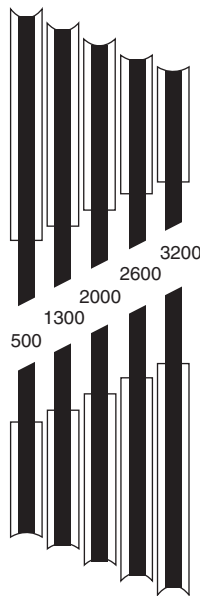
7. Rear belt door
8. Hand wheel
9. Side belt door
10. Bed
11. On/Off switch
12. Tailstock handle

# ADJUSTING THE MAIN SPINDLES SPEED

(Number callouts refer to the Parts List on page 7)

First, open the rear belt door (#20) of headstock (#19). Loosen the ratchet handle (#33), to allow the motor plate (#31) to swivel upwards. Open the side belt door (#55) to gain access to the motor pulley. Change the speed by moving the drive belt (#26) from one pulley to another (always go from larger pulley to smaller pulley) making sure that the belt runs in parallel grooves at all times. When finished changing, pull down the motor plate to tighten the belt, then secure the ratchet handle (#33). Affix the rear belt door (#20) to the head stock (#19) and secure the side belt door (#55).

**Speed Chart**



Headstock pulley

To adjust turning speeds, open the access doors to the motor pulley and headstock pulley and align the belt as indicated in figure on left.

*Note that speeds vary from 500 RPM to 3200 RPM.*

Motor Pulley

## RECOMMENDED TURNING SPEEDS

<b>Work Diameter in Inches</b> .....	<b>Speeds</b>
0-2" .....	2600-3200 RPM
2"-3" .....	2000-2600 RPM
3"-4" .....	1300-2000 RPM
4"-5" .....	500-1300 RPM
6"+ .....	500 RPM

**Note:** These speeds can vary with different wood species and the skill of the operator. Unbalanced pieces generally should be turned on speeds lower than those recommended above.

### Sanding

Use the fastest speed possible without burning the wood.

### Polishing & Finishing

Generally finishing can be done at faster speeds than turning

## **BELT, SPINDLE AND BEARING REPLACEMENT FOR THE #TCLPRO LATHE**

To change the belt (#26), spindle (#14), or bearings (#15 and 18) for the lathe, you must first loosen the two set screws (#28) and hand wheel (#22). Next remove the access door (#20, #21, and #52) and loosen the set screw (#24) on the drive pulley (#25).

Tap out the spindle using a mallet. If you do not have a mallet, place a block of wood against the spindle and tap with a hammer. To get the spindle completely out, use a flat head screwdriver to punch it the rest of the way. Be careful not to damage the bearings or the threads.

*Replace the bearings, spindle or belt as required.*

**BELT:** You need only to move the spindle enough to slide a new belt on.

**SPINDLE:** You must knock the spindle completely out through both bearings.

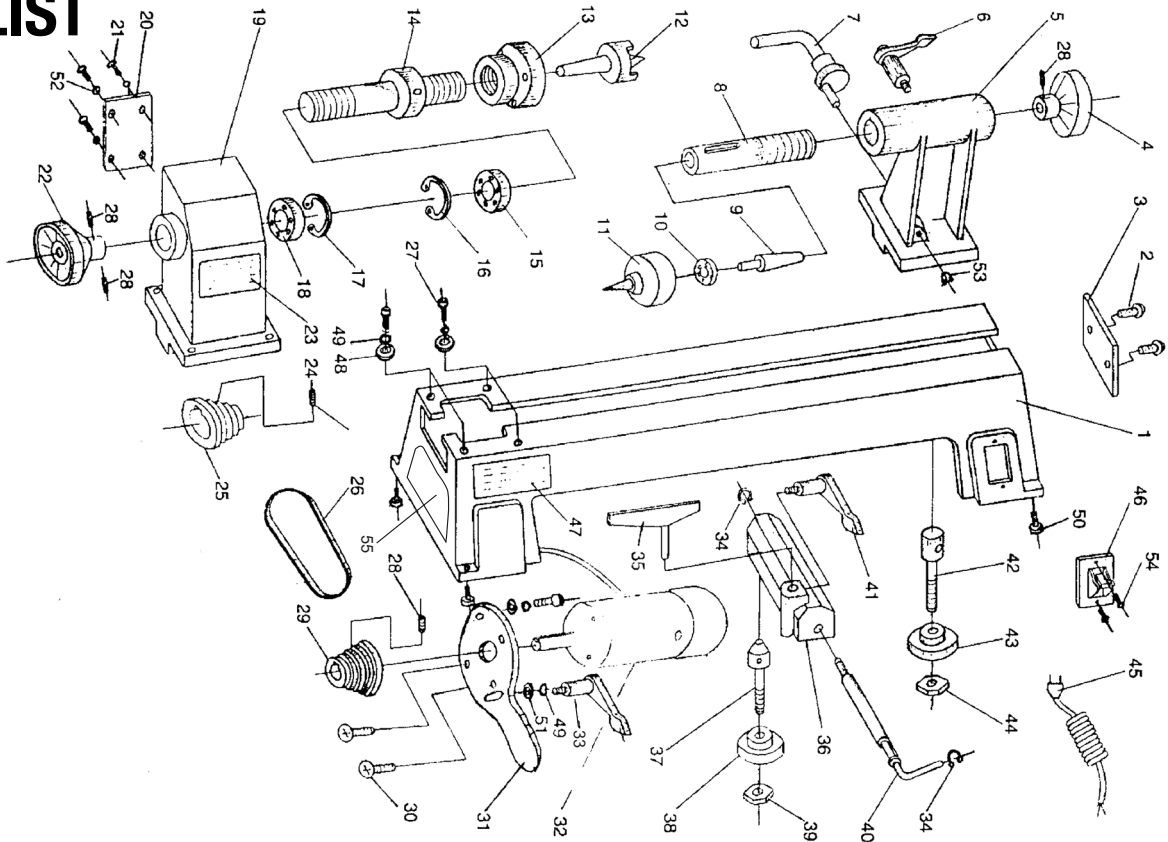
**BEARINGS:** After removal of the spindle, completely – knock out the bearings from the inside of the headstock. This is best accomplished by inserting a long rod or screwdriver through one bearing inside the headstock toward the opposite bearing. Tap firmly to remove the bearing from the casting. Do the same for the second bearing.

**Please be aware not to damage the retainers (#16 and #17) when tapping out the bearings.**

Reassemble the new bearings by tapping them into place from the outside. Replace the spindle.

**Note:** You may have to loosen the ratchet handle (#33) to reinstall the spindle pulley and belt. Reinstall the hand wheel and set screws. DO NOT tighten the hand wheel against the bearings. Tighten the pulley set screw and close the access door.

# PARTS LIST



No.	Part#	Description	Qty	No.	Part#	Description	Qty
1	ZTCL3-01	BED	1	29	ZTCL3-29	MOTOR PULLEY	3
2	ZTCL3-02	SEMI-CIRCLE HEAD SCREW	2	30	ZTCL3-30	FLAT HEAD SCREW	2
3	ZTCL3-03	RETAINING PLATE	1	31	ZTCL3-31	MOTOR PLATE WITH NOTCH	1
4	ZTCL3-04	HAND WHEEL	1	32	ZTCL3-32	MOTOR	1
5	ZTCL3-05	TAILSTOCK	1	33	ZTCL3-33	RATCHET HANDLE	1
6	ZTCL3-06	LOCK LEVER	1	34	ZTCL3-34	RING RETAINING 12	2
7	ZTCL3-07	ECCENTRIC AXIS	1	35	ZTCL3-35	TOOL REST	1
8	ZTCL3-08	TAIL AXIS	1	36	ZTCL3-36	TOOL REST BASE	1
9	ZTCL3-09	TAPER ROD	1	37	ZTCL3-37	BOLT	1
10	ZTCL3-10	BALL BEARING	1	38	ZTCL3-38	PLATE	4
11	ZTCL3-11	CUP CENTER	1	39	ZTCL3-39	HEX NUT	1
12	ZTCL3-LS	HEADSTOCK SPUR CENTER	1	40	ZTCL3-40	LOCK HANDLE FOR CHISEL BASE	1
13	ZTCL3-13	FACE PLATE	1	41	ZTCL3-41	LOCK LEVER	1
14	ZTCL3-14	HEADSTOCK SPINDLE	1	42	ZTCL3-42	BOLT	1
15	ZTCL3-15	BALL BEARING	2	43	ZTCL3-43	LOCK PLATE	1
16	ZTCL3-16	RETAINING RING	1	44	ZTCL3-44	HEX NUT	1
17	ZTCL3-17	RETAINING RING	1	45	ZTCL3-45	POWER CORD	1
18	ZTCL3-18	BALL BEARING (202)	1	46	ZTCL3-46	SWITCH	1
19	ZTCL3-19	HEADSTOCK	1	47	ZTCL3-47	WARNING LABEL	2
20	ZTCL3-20	REAR BELT DOOR	1	48	ZTCL3-48	WASHER 8	4
21	ZTCL3-21	SEMI-CIRCLE HEAD SCREW	4	49	ZTCL3-49	SPRING WASHER	1
22	ZTCL3-22	BALANCE WHEEL	1	50	ZTCL3-50	RUBBER WASHER	4
23	ZTCL3-23	MARKING PLATE	1	51	ZTCL3-51	BIG WASHER 8	2
24	ZTCL3-24	HEX SOCKET SET SCREW	1	52	ZTCL3-52	WASHER 5	4
25	ZTCL3-25	DRIVE PULLEY	1	53	ZTCL3-53	RING RETAINING 10	1
26	ZTCL3-26	DRIVE BELT	1	54	ZTCL3-54	SEMI-CIRCLE HEAD SCREW M5X10 2	1
27	ZTCL3-27	HEX SOCKET SCREW M8x25	1	55	ZTCL3-55	SIDE BELT DOOR	1
28	ZTCL3-28	HEX SOCKET SCREW M6 x 10	4				

# OPTIONAL ACCESSORIES FOR TurncrafterPro™

## DUPLICATING SYSTEM

- PSI duplicator attachment . . . . . #CML-DUPJ
- Optional 2-ended carbide cutter . . . . . #CML-DUPX
- Steel duplicator templates for a variety of projects.

## HEADSTOCK ACCESSORIES

(1" x 8tpi or #2 Morse Taper)

- 1 -3/8" mini expanding collet chuck . . . . . #CXC4 & #CXCMT2
- 4-Jaw self-centering chuck . . . . . #C4J
- 3-Jaw self-centering chuck . . . . . #C3J-4
- 3/8" Drill chuck- #2 MT mount . . . . . #TM22
- 1/2" Drill chuck- #2 MT mount . . . . . #TM32
- Mini screw chuck . . . . . #PK-TOP-MJ
- 5/16" Mini cup chuck – #1 MT mount . . . . . #CSC
- Chisel Mate . . . . . #LCM5
- 4-Piece Drive Center . . . . . #LCENT4

## OTHER ACCESSORIES

- Dust collection hood . . . . . #DLHOODC
- Pen making mandrel- 1" x 8tpi . . . . . #PKM-BL
- Pen making mandrel- #2 MT . . . . . #PKM-FLC
- Extension bed . . . . . #TCLPROXB
- “S” Toolrest . . . . . #CLTSJ
- “V” Toolrest . . . . . #CVTJ
- 8" Toolrest . . . . . #CLT8JE
- 12" Toolrest . . . . . #CLT12JE



9900 Global Road

Philadelphia, PA 19115

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