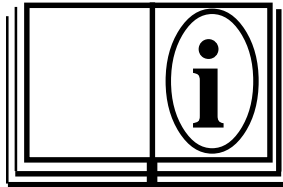




**EB BOILER TUBE LATHE
SPECIAL #01-008**



	TUBE & PIPE
Mod. EB	Ser.No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
E.H. WACHS COMPANIES 100 Shepard St. Wheeling Il. 60090 Patent Pending	

Part Number: 01-008

Revision No: _____

created
04/18/01

EB BOILER TUBE LATHE

TABLE OF CONTENTS

SECTION I.	SAFETY INSTRUCTIONS	1
SECTION II.	INTRODUCTION	2
SECTION III.	SPECIFICATIONS	3
SECTION IV.	SET UP & OPERATING PROCEDURES	4-5
SECTION V.	MAINTENANCE.....	7-8
SECTION VI.	PARTS LISTS.....	7-8
SECTION VII.	TROUBLESHOOTING	9
SECTION VIII.	ORDERING INFORMATION	10

EB BOILER TUBE LATHE

SECTION I

SAFETY INSTRUCTIONS



Read the Following thoroughly before proceeding

Since 1883, EH Wachs has built a reputation for quality and a commitment to consumer satisfaction. In accordance with this, Wachs must take on the added responsibility of doing our best to assure the safest use of our equipment.

We have assembled a list of safety reminders to aid in creating the safest possible working environment. We recommend that the precautionary steps listed there be closely observed.

1. **READ THE OPERATING MANUAL!!**

Reading the setup and operating instructions prior to beginning the setup procedures can save valuable time and help prevent injury to operators or damage to machines.

2. **INSPECT MACHINE & ACCESSORIES!**

Prior to machine setup physically inspect the machine and it's accessories. Look for worn tool slides, loose bolts or nuts, lubricant leakage, excessive rust, etc. A properly maintained machine can greatly decrease the chances for injury.

3. **ALWAYS READ PLACARDS & LABELS!**

All placards, labels and stickers must be clearly legible and in good condition. Replacement labels can be purchased from the manufacturer.

4. **KEEP CLEAR OF ROTATING PARTS!**

Keep hands, arms and fingers clear of all rotating or moving parts. Always turn machine off before attempting any adjustments requiring contact with the machine or it's accessories.

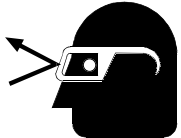
5. **SECURE LOOSE CLOTHING & JEWELRY!**

Loose fitting clothing, jewelry; long, unbound hair can get caught in the rotating parts on machines. By keeping these things secure or removing them you can greatly reduce the chance for injury.


6. **KEEP WORK AREA CLEAR!**

Be sure to keep the work area free of clutter and nonessential materials. Only allow those personnel directly associated with the work being performed to have access to the area if possible.


ALWAYS WEAR PROTECTIVE EQUIPMENT:

	WARNING Impact resistant eye protection must be worn while operating or working near this tool.
--	---

For additional information on eye and face protection, refer to federal OSHA regulations, 29 Code of Federal Regulations, Section 1019.133., Eye and Face Protection and American National Standards Institute, ANSI Z87.1, Occupational and Educational Eye and Face Protection. Z87.1 is available from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

	CAUTION Personal hearing protection is required at all times when operating or working near this tool.
--	--

Hearing protectors are required in high noise areas, 85dBA or greater. The operation of other tools and equipment in the area, reflective surfaces, process noises and resonant structures can substantially contribute to and increase the noise level in the area. For additional information on hearing protection, refer to federal OSHA regulations, 29 Code of Federal Regulations, section 1910.95, Occupational Noise Exposure and ANSI S12.6 Hearing Protectors.

	CAUTION Some individuals are susceptible to disorders of the hands and arms when exposed to tasks which involve repetitive motions and/or vibration. Disorders such as Carpal Tunnel Syndrome and Tendonitis can be caused or aggravated by repetitious, forceful exertions of the hands and arms.
<ul style="list-style-type: none">• Use minimum hand grip force.• Keep wrists straight• Avoid prolonged, continuous vibration exposure• Avoid repeated bending of wrists and hands.• Keep arms and hands warm and dry.	

EB BOILER TUBE LATHE

Introduction:

The “EB” is specifically built for excavation of dissimilar welds in boiler applications. It also performs cut and bevel operations on heavy wall boiler tubes. The “EB” clamps to the tube with self centering clamp pads. The cutting/feed system on the “EB” is comprised of 2 tool slides and a spring loaded trip assembly. The feed system requires no adjustment and no star wheel alignment. Each tool slide provides up to 3/4” (19mm) of travel.

Designed to work with ease, the “EB” only requires 2 hand tools for setup. The spherical alignment pins allow the frame halves to be split and reassemble together effortlessly. Seals and brushes keep metal chips away from bearing raceways, reducing maintenance downtime.



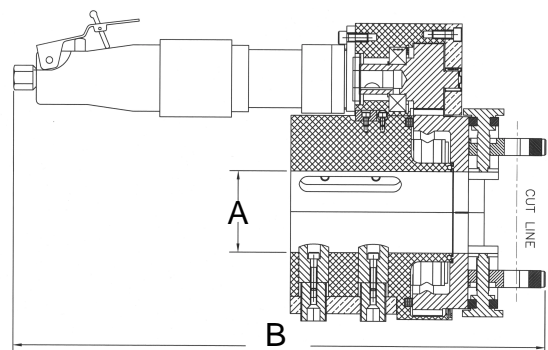
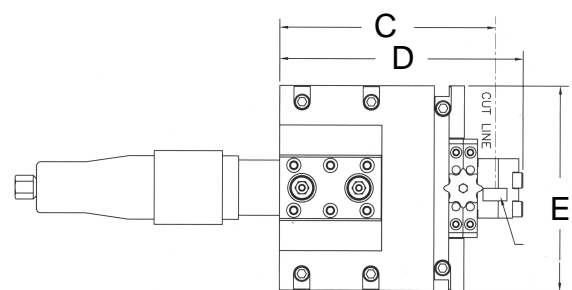
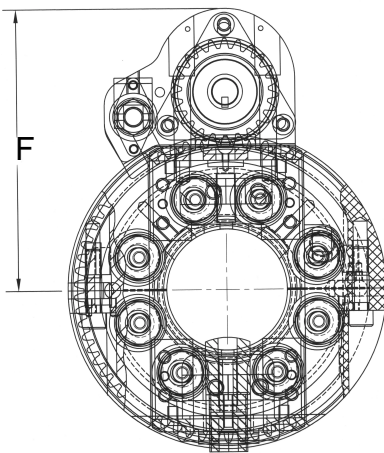
EB BOILER TUBE LATHE

SECTION III

SPECIFICATIONS

SP# 01-008

Machining Functions:	Boiler tube weld excavating, sever and bevel.
Capacity:	Machine boiler tube 2.125 O.D. (54mm)
Feed:	Starwheel trip
Drive:	Pneumatic
Air Requirements:	35 cfm @ 90 psi
Air Motor:	1.0 HP
Tooling:	High speed steel form tools. 3/8" - 3/4" (9x19mm)
Clearance Required:	1.750" (44 mm) on 2.125" (54 mm) O.D.
Installation:	5 minute set up.
Controls:	On/Off trip lever. On/Off air motor with safety lock out
Clamping:	O.D. clamping 2.125 O.D. (54mm)
Standard Equipment:	Basic EB machine, air motor, 6' hose whip w/swivel, two cutting slides, On/Off trip lever, installation tools, storage case and operating manual.
Optional Equipment:	Clamping leg sets



"A" Dimension	2.250" (60.3mm) I.D.
"B" Dimension	15.625" (396.8mm)
"C" Dimension	6.625" (168.2mm)
"D" Dimension	7.500" (190.5mm)
"E" Dimension	5.625" (158.7mm) O.D.
"F" Dimension	5.5" (139.7mm)

EB BOILER TUBE LATHE

SECTION IV

SET UP & OPERATING INSTRUCTIONS

EB BOILER TUBE LATHE

Set Up & Operation Procedure

1. Install supplied leg set for boiler tube O.D. being excavated. Requires 2 fixed legs and 1 universal adjustable. (FIG 1)

NOTE: 1.750" Pipe O.D. leg set available PN 74-009-03



FIG 1

2. Install the EB machine half around boiler tube to be excavated.
3. Tighten the 6 stationary and rotating captive frame locking screws equally. (FIG 2)

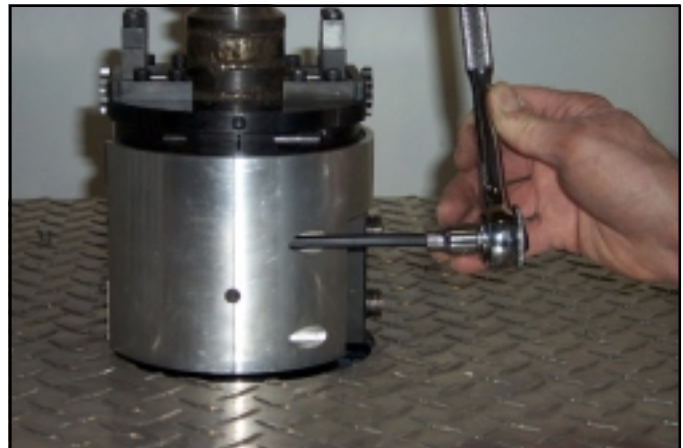


FIG 2

4. Slide the EB machine to approximate centerline of weld excavation. Visually use the toolslide tool holder slot to align machine over weld excavation area.
5. Tighten the 2 adjustable leg tensioning Socket Set Screws to secure machine. (FIG 3)

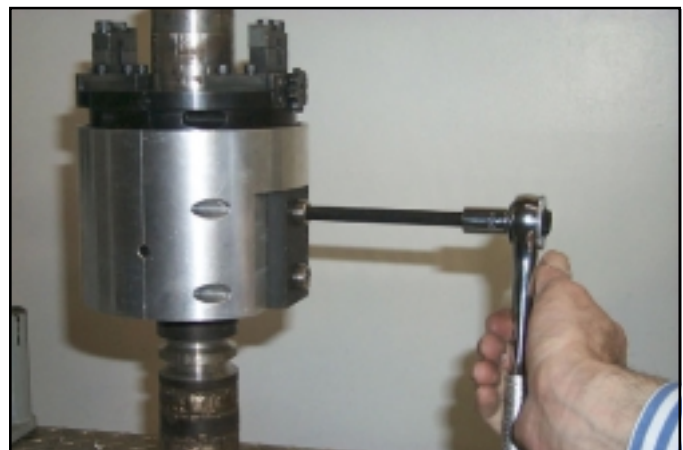


FIG 3

EB BOILER TUBE LATHE

Set Up & Operation cont.

6. Insert the weld excavation beveling bits. **(The machine rotates clockwise as viewed from the front).** The cutting edge of tool bit must face the rotation direction. (FIG 4)

NOTE: If necessary relocate machine so weld excavation bevelers are over weld excavation area.

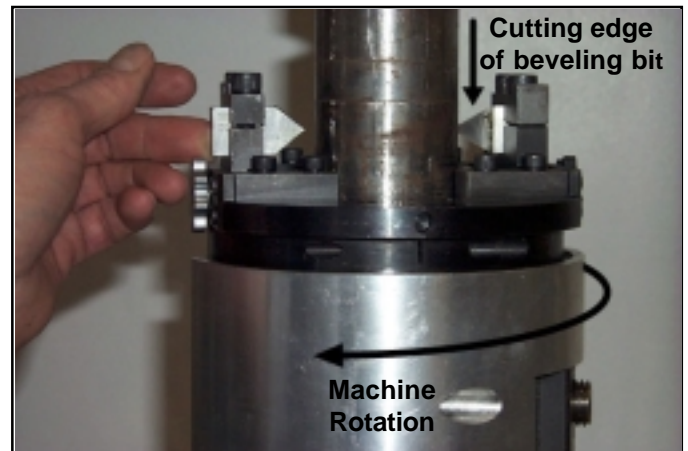


FIG 4

7. Install air motor and pinion housing assembly using the 2 captivated socket head cap screws in pinion housing. (FIG 5)



FIG 5

8. Connect air line to air source.

9. Engage feed trip pin. (FIG 6)

NOTE: Star wheel timing is automatic.

10. Squeeze air motor trigger and begin weld excavation.



FIG 6

EB BOILER TUBE LATHE

SECTION V

MAINTENANCE

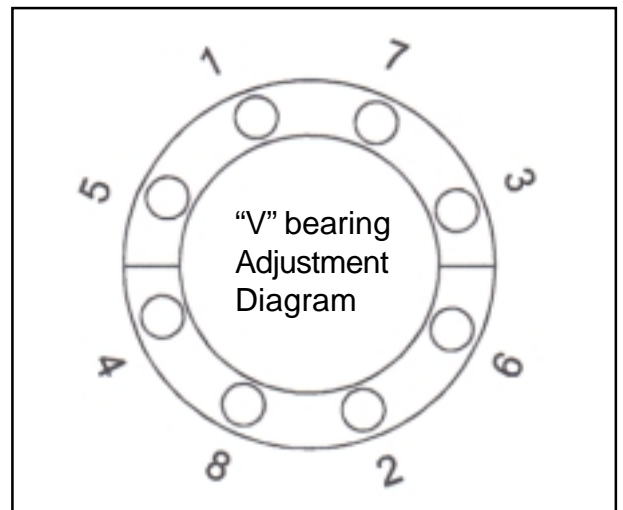
EB BOILER TUBE LATHE

SECTION V

MAINTENANCE-MACHINE ADJUSTMENTS

“V” BEARING ADJUSTMENT PROCEDURE

1. With slides and motor removed, assemble machine and remove bearing access screw (3/8 hex key) bolt 1/2-24.
2. With the machine placed on the rotating ring
Placed in a vise loosen 3/8 nyloc nuts. This is performed by using a 9/16 special deep socket wrench and 5/32 hex key (T handle). Hold T handle place socket over nut turning counter clock wise.
3. Starting at #1 location (refer to diagram) turn eccentric shaft (counter clockwise) till rotating ring is aligned with stationary ring. In the I.D. of the machine move “T” handle to #2 location and repeat above step. Move to #3 location and repeat alignment procedure. Continue process on all shafts until rotation ring is centered to stationary ring.
4. Holding stationary ring in vise insert 5/32 hex key (T) in SHCS and 9/16 special deep socket on nyloc nut (turn clockwise). Holding hex key in place snug nuts
5. Check alignment of rotating ring to stationary ring. If aligned turn machine over and hold machine by stationary ring. Looking through bearing access screw hole insure that all bearings are turning, any bearings that do not turn repeat step 3 & 4 till all bearings turn.
6. Install bearing access screw, install slides and motor



Note: Tighten in criss cross pattern according to diagram.

5. Check alignment of rotating ring to stationary ring. If aligned turn machine over and hold machine by stationary ring. Looking through bearing access screw hole insure that all bearings are turning, any bearings that do not turn repeat step 3 & 4 till all bearings turn.

EB BOILER TUBE LATHE

SECTION VI

PARTS LISTS

EB BOILER TUBE LATHE

<i>Project Assembly: Number 01-008</i>		<i>Project Description: Low Profile EB Machine for 2.125 O.D.</i>
QTY.	PART No.	DESCRIPTION
1	01-008-001	FRAME, STATIONARY
1	01-008-002	FRAME, ROTATING
2	01-008-003	HOUSING, SLIDE
2	01-008-004	MODIFICATION - FEED SCREW (74-015-00)
8	01-008-005	MODIFICATION - PIN, SLIDE (74-016-00)
1	01-008-006	MODIFICATION - HOUSING, PINION (74-021-00)
1	01-008-007	MODIFICATION - COVER, PINION HOUSING (74-022-00)
1	16-026-00	MOTOR, AIR
1	16-082-00	CASE
1	60-160-00	RING, RETAINING
1	60-125-00	BEARING
8	74-002-00	BEARING, ECCENTRIC
8	74-003-00	NUT, LOCKUT
16	74-004-00	O-RING, BUNA-N
8	74-005-00	SHAFT, ECCENTRIC
8	74-006-00	WHEEL, BEARING
40	74-007-01	.001 "WASHER, BRG. CAP
16	74-007-05	.005 "WASHER, BRG. CAP
8	74-007-10	.010 "WASHER, BRG. CAP
24	74-008-00	WASHER, THRUST BRG.
2	74-009-01	CLAMP PAD, FIXED 2.125 O.D.
8	74-010-00	CAP, BEARING
4	74-012-00	SUPPORT, FEED SCREW
2	74-013-00	MALE SLIDE
4	74-014-00	COVER, MALE SLIDE
1	74-017-00	PLATE, ADJ. CLAMP PAD
1	74-018-00	GEAR, PINION
2	74-019-00	CLAMP PAD, ADJUSTABLE
2	74-020-00	SCREW, ADJ. CLAMP
1	74-023-00	SHAFT, TRIP
1	74-024-00	CAP, TRIP
1	74-025-00	LEVER, TRIP

EB BOILER TUBE LATHE

<i>Project Assembly: Number 01-008</i>		<i>Project Description: Low Profile EB Machine for 2.125 O.D.</i>
QTY.	PART No.	DESCRIPTION
1	74-026-00	PIN, PULL
6	74-027-00	PIN, ALIGNMENT
16	73-030-01	BEARING, THRUST
1	74-034-00	SPRING, DISC
1	74-035-00	BEARING, NEEDLE
1	74-036-00	RING, RETAINING
1	73-037-00	SWIVEL, 1/4"
1	74-038-00	FOAM, CASE
1	73-040-00	AIR HOSE ASSM, 1/4" x 6'
6	90-001-02	SHCS, 6-32 x 1/4"
2	90-016-52	ROLL PIN, 3/32" x 1/4"
2	90-020-03	SHCS, 8-32 x 3/8"
1	90-026-07	DOWEL PIN, 1/8" x 3/4"
8	90-040-53	SHCS, 10-32 x 3/8"
2	90-040-58	SHCS, 10-32 x 7/8"
2	90-044-52	SSS, 10-32 x 1/4"
4	90-046-05	PIN, 3/16 x 1/2 DOWEL
1	90-046-07	DOWEL PIN, 3/16" x 3/4"
1	90-056-12	DOWEL PIN, 1/4" x 1-1/4"
6	90-050-06	SHCS, 1/4-20 x 5/8"
8	90-051-12	SHCS, 1/4-20 x 1-1/4
10	90-053-07	FHCS, 1/4-20 x 3/4"
2	90-054-02	SSS, 1/4-20 x 1/4"
8	90-056-17	DOWEL PIN, 1/4" x 1-3/4"
2	90-060-07	SHCS, 5/16-18 x 3/4"
2	90-060-17	SHCS, 5/16-18 x 1-3/4"
2	90-069-10	H'COIL, 5/16-18 x .312
8	90-075-53	WASHER, 3/8" FLAT
1	90-096-12	DOWEL PIN, 1/2" x 1-1/4"
2	90-214-12	SSS, 3/4-10 x 1-1/4"

EB BOILER TUBE LATHE

SECTION VII

TROUBLE SHOOTING

EB BOILER TUBE LATHE

SECTION VII

TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
Machine won't turn	Power supply not on	Check power supply
Improper bearing preload	Refer to maintenance for proper	Adjustment procedure.
Machine Runs Slowly	Improper Speed	Check air supply.
Tool slides do not feed	Trip pin not engage	Engage trip pins
Machine moves during cutting	Loose clamp pads	Tighten clamp pads
Machine chatters during cutting	Speed control set too fast Loose clamp pads	Slow down cutting speed. Tighten clamp pads
Poor cutting quality	Tool bit is dull Improper tool installation Lubricant necessary	Replace tool bit. Refer to tool bit installation instructions. Refer to lubricant information in operation instructions.

If a problem persists or is not listed in the above chart, cease operation and consult the manufacturer for additional instructions.

To place an order or to get more detailed information on any E.H. Wachs products, call us at:
1-800-323-8185.

ORDERING REPLACEMENT PARTS

Please use parts list provided in manual. Have part description and part number of required replacement part or parts to help expedite order and insure proper parts are being ordered.

REPAIR INFORMATION

Please call E.H. Wachs Company prior to returning any equipment for repair. We will advise you of shipping and handling. Please enclose with equipment to be repaired your name, address, phone number and a brief description of problem or work to be done or estimated.

All repair work done at our plant will be estimated and the customer advised of cost and time required to complete repair.

WARRANTY INFORMATION

Enclosed with the manual is a warranty card. Please fill out the registration card and return to E.H. Wachs. Retain the owners registration record and warranty card for your information.

RETURN GOODS ADDRESS

E.H. Wachs Company
100 Shepard Street
Wheeling, Illinois 60090



Call or Write:

E.H. Wachs Company
100 Shepard Street
Wheeling, Illinois 60090

847-537-8800

FAX: 847-520-1147 • 847-520-1168

Toll-Free: 1-800-323-8185

	TUBE & PIPE		
	Mod. Ser.No.	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
Enter Your Machines Serial Number Here For Proper Record Keeping and Ordering Reference.			