

MACTECH 4-24B (Extended) END PREP LATHE SPECIFICATIONS

Mactech Model 4-12B Single Point End Prep Lathe is a portable I.D. mounted end prep lathe for machining pipe and valves from 4" (schedule 5-80) to 12" (all schedules). Capable of simultaneously beveling, facing and counterboring, it also has single point beveling and flange facing capabilities out to 24" diameter. The tool has self-accepting torque, straight back feed and integral air or hydraulic drive.

The equipment listed is our current production Model 4-12B, which when connected to the plant air or the hydraulic power supply according to the operating requirements specified below, can be used for the pipe machining functions described herein. At the rear of the 4-12B is an axial feed knob, which is manually rotated during form cutting, moving the tool bit and cutting head axially along the mandrel toward or away from the work piece. For single point operation, this axial movement (gauged by a removable ring) is accompanied by simultaneous automatic radial movement of the tool holder, producing the desired angled bevel.

Model 4-24B (Extended) Components

Frame:

The lightweight frame is made of solid stock aluminum (stronger than cast aluminum). The frame has bearings mounted for the rotating head, a drive motor mount, and a torque housing which transfers the torque reaction generated by the cutting operation through the mandrel to the pipe being cut.

Mandrels & Locator Pads:

The 4-12B comes with two 3-jaw automatic expanding chuck mandrels, each with 3 sets of locator pads. An optional miter mandrel with 2 sets of locator screws are available for mitering and cutting T's and elbows.

Cutting Head Assembly:

The cutting head assembly is a heat treated 4340 alloy steel gear assembly, integrated into the aluminum frame.

Bearings:

The cutting head runs on high precision ball roller main bearings which provide for both axial and radial force reactions experienced in heavy wall pipe machining.

Drive Assembly:

The motor drive assembly is precision mounted to the machine frame and arranged with a pinion gear on a shaft supported by angular thrust radial ball bearings and needle bearings. The drive mounting bracket is designed to accept the reaction torque generated by the drive motor.

Tool Holders (Blocks):

The single point tool holder mounted to the cutting head assembly is provided with an automatic radial feed "star wheel" mechanism. This can be replaced with the extra form cutting tool block, which then gives the 4-12B simultaneous form bevel, land face, and counterbore capabilities. Once set up this way, the tooling can be used to prep repeated pipes with little or no re-adjustment. The slides feature adjustable gibs to adjust for wear.

Tool Bits:

Mactech tool bits are available for single and multi-angle beveling, J beveling, land facing, counterboring, flange facing, valve bonnet facing, victaulic grooving, etc. Tool bits are sold separately as consumables.

Model 4-12B Performance Data

Set-up Time:

A trained operation can set up the 4-12B on an unobstructed pipe end or flange in no more than 15 minutes.

Pipe Mounting Range:

Nominal pipe diameter mounting range:

<u>#1 Auto Mandrel</u>	<u>#2 Auto Mandrel</u>	<u>Independent Extended Mandrel</u>
3.80" - 6.80" I.D.	6.80" - 12.0" I.D.	10-20" I.D.

Pipe Cutting Range:

Step cutting may be required for form cutting heavy wall pipe.

<u>Type of Cut</u>	<u>Cutting Range</u>	<u>Wall Thickness</u>	<u>Clearance</u>
Form Cutting	3.80" I.D.-12.75" O.D.	Schedule 80	14.25"
Single Point Cut	3.80" I.D.-24.00" O.D.	All schedules	

Drive Capacity:

Drive capacities are based on in-house testing and extrapolation of test data.

In-Line Air Drive (4800U) - Motor Data:

Free Speed:	185 rpm (No load)
Speed @ Max. Power:	97 rpm (Full load)
Air Requirements:	95 cfm @ 90 psi
Max. Horsepower:	3.50 hp
Starting Torque:	265 ft/lb
Stall Torque:	354 ft/lb

Model 4-12B General Information

The Model 4-12B End Prep Lathe is packed in protective foam and typically comes complete with the following:

- *In-line Air Drive
- * Single Point Facing Tool Blocks
- *Automatic mandrels 1 & 2 plus extended independent chuck
- *All sets of locator pads or locator screws
- *All hand tools required
- *Air Caddy (Filter & Lubricator) with any air drive
- *Gang box for machine storage
- *Operating Manual with parts list

Shipping Weight:	245 lb.	Shipping Dimensions:	36x19x17 in.
Operating Weight:	115 lb.	Mandrel (#1)	
	.	Cutting Head	

Special Options:

Right Angle Drive
2T Counterboring Holder

Recommended Spare Parts:

Mactech, Inc. recommends purchasing extra parts to avoid time spent waiting for lost or damaged parts to be replaced.

Technical Support:

Mactech, Inc. recommends on-site training for your technicians by our technical support personnel to assure proper operation and maintenance. Costs would be predicated on travel expenses, number of days required to train technicians, per diem, expenses, etc.

Warranty:

Two (2) year limited warranty.