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READ INSTRUCTIONS BEFORE OPERATING

SHERLINE INDUSTRIAL PRODUCTS DIVISION

Custom Glass Blowing/Laser Welding Lathe FAQs

What to Know before Ordering a Custom Lathe

Take a look at the ***Glass Blowing/Laser Welding Lathes*** section on the Sherline Industrial Products web page, Custom Designed and Built Machines and Components, and you will see several pictures. You can click on each picture on the page to get a larger view and check them out.

Basic Lathe Information

1. Most of the machines in the following pictures are based on our 8" lathe (15" bed). The same basic machine can be made using our 17" lathe (24" bed).
2. If needed, we can build a lathe with a maximum bed length of 36", and we cut the base in half for support at each end of the bed (see Figure 1).

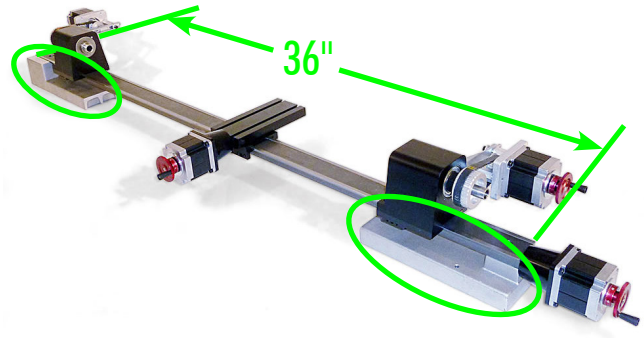

FIGURE 1—The split base is indicated by the green ovals.

Things to Consider

1. All of the reference pictures show lathes with a lathe saddle/crosslide assembly. Do you need a lathe saddle and/or crosslide for tool mounting? If so, do you want to move them manually, do you want them attached to a leadscrew with a handwheel to position them, or do you want them attached to a leadscrew with a stepper motor to position them?

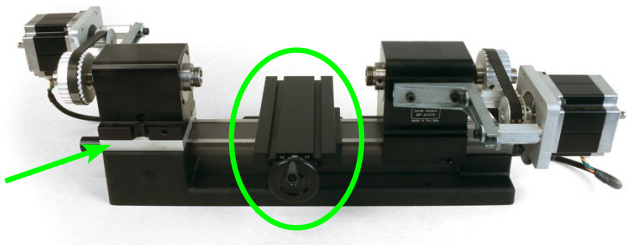

FIGURE 2—The green oval indicates a manual lathe saddle with an 8" crosslide. Notice the headstock riser plate (green arow). The riser plate (P/N 1294) raises the headstock to match the additional thickness of the 8" crosslide.

2. Another option is to have a movable Z-axis headstock. The movable headstock can be moved by hand and locked in place, or it can be connected to a leadscrew and moved manually with a handwheel, or moved by CNC with a stepper motor.

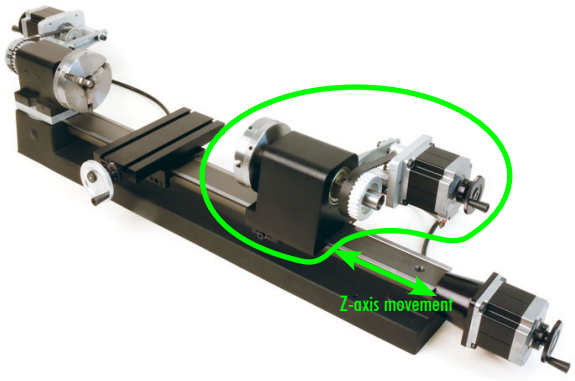

FIGURE 3—The green outline indicates the moveable headstock on the Z-axis. The headstocks on this lathe are turned by stepper motors with cog pulleys.

3. If you decide that you want anything connected to a leadscrew, we can only connect one assembly to the leadscrew, i.e. a lathe saddle or a headstock, but not both.
4. Part holding options.
   A. You can use chucks for holding your part if you are using a mandrel. You can choose either a 2.5" diameter or 3.1" diameter chuck (see Figure 4).

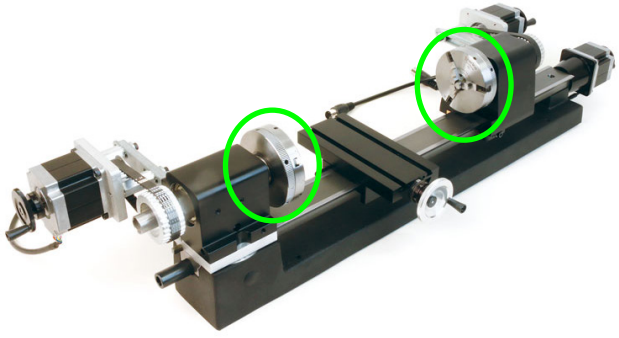

FIGURE 4—The green ovals show two 3.1" 3-jaw chucks.

   B. You can also use an ER-16 headstock with ER-16 collets to hold parts. ER-16 headstocks are

available with a standard base or with a dovetail base. The ER-16 collet range is .020" to .500". Sherline does not carry ER-16 collets, but they can be purchased from industrial tool suppliers.*

*ER-16 collets and collet nuts are available from major tool suppliers including the following:

- Manhattan Supply Co. (MSC)—(800) 645-7270
- McMaster-Carr—(562) 692-5911
- Travers Tool Co.—(800) 221-0270

You can also mix and match your part holding options by using a chuck on one headstock and an ER-16 collet on the other.

5. The centerline of the dovetail headstock spindle is 2.184" above the top of the lathe bed dovetail surface.

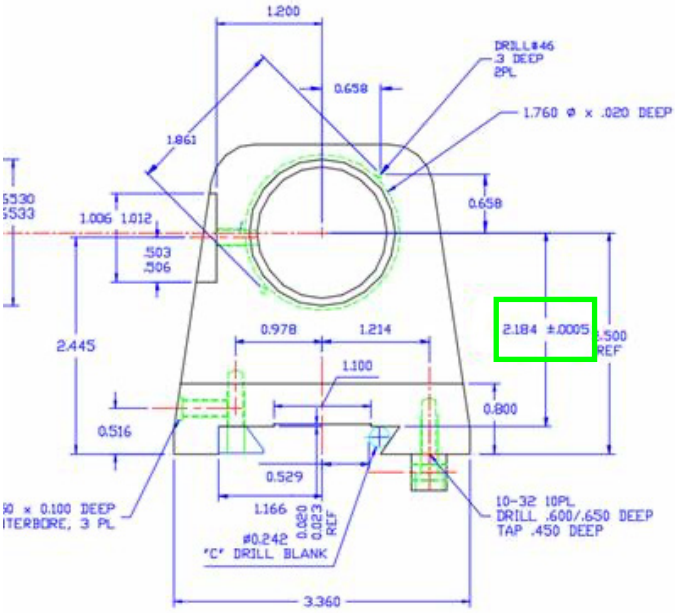

FIGURE 5—The green rectangle indicates the 2.184" spindle centerline height above the lathe bed dovetail surface.

6. You can choose from 6" or 8" crosslide. The 8" is thicker. The spindle centerline is 1.374" above the top of our 6" crosslide, and is 1.124" above the top of our 8" crosslide.

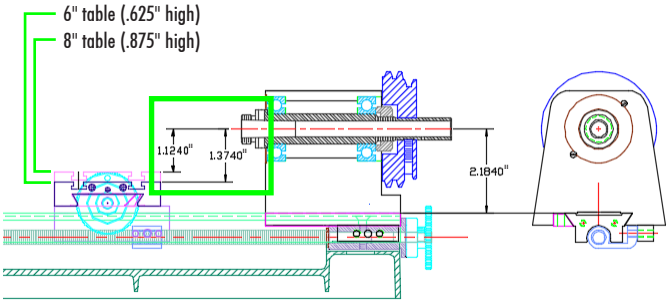

FIGURE 6—The green rectangle indicates the distances from the top of the two tables to the centerline of the headstock spindle.

7. We also offer a 13" crosslide which is the same thickness as the 8". However, because of the leverage factor and the short dovetail contact length of the lathe saddle, you are not going to be able to mount any considerable weight on the end of the 13" crosslide without having mechanical and structural problems.

Check this information out, and we can go from there. Send your project details to us at sherline@sherline.com to request a quote for you custom lathe project.

Thank you,
Sherline Products Inc.