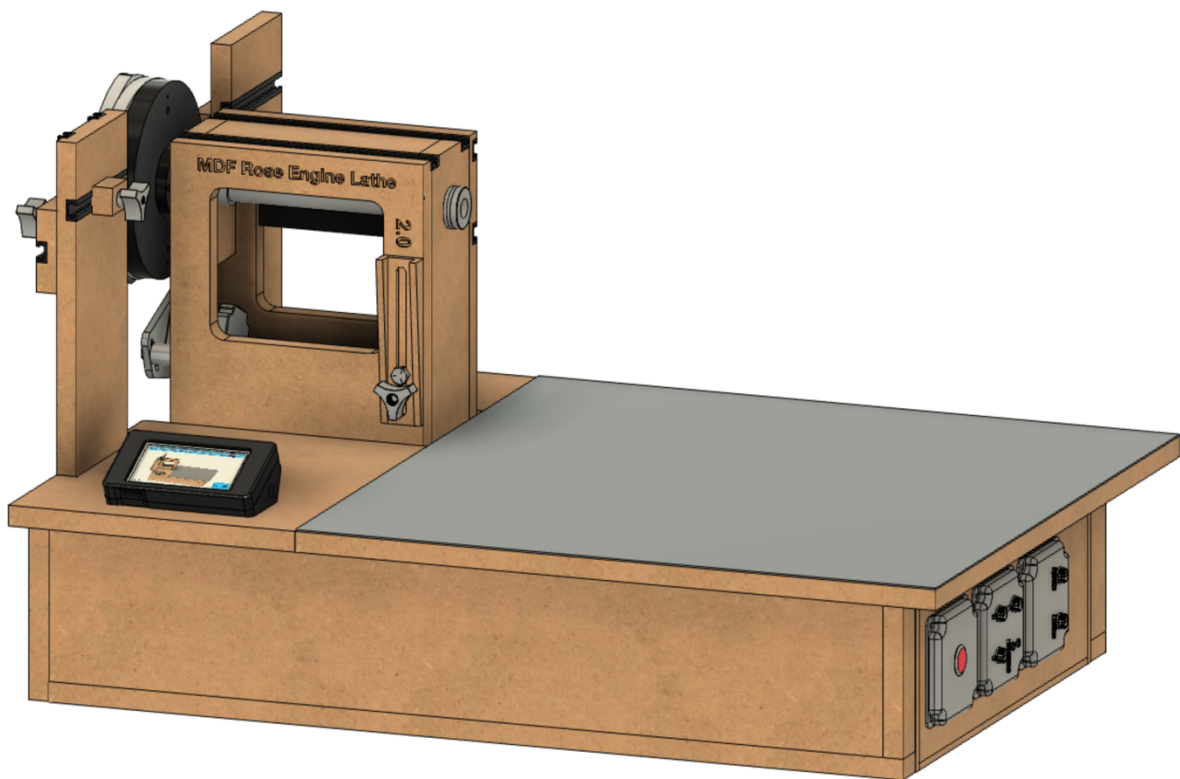


MDF Rose Engine Lathe 2.0



Frequently Asked Questions

Version 1.2
08 January 2021

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

This document is intended to answer frequently asked questions about the rose engine lathe kit sold on www.ColvinTools.com.

If you have any questions, please contact us at ColvinTools@Gmail.com.

Good luck.

Rich Colvin & Jack Zimmer

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

Table of Contents

General 4

What Do I Need to Get Started? 5

Spindle 10

Spindle Drive 10

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

The questions below are commonly asked, and responses are given to help the reader.

General

Does this design accommodate both rocking and pumping?

This kit provides for rocking, and there have been a number of people who have adding pumping capabilities. That capability is not provided by this kit at this time.

As we evolve and add to the system features over time, we will evaluate and consider adding it to the system. It will probably come as an add-on to the base system and will not require changes to the design we have delivered.

None-the-less, if you are new to ornamental turning, there are so many capabilities provided by this machine that it will probably be a long time before you find the lack of pumping to be a limitation to your artistic endeavors (at least I haven't yet).

Does this design accommodate a barrel approach with more than two rosettes?

The use of more than two rosettes at one time is something not accommodated by the design of this lathe. We have spoken with a large number of MDF rose engine lathe users, and none have expressed that having only two rosettes has limited their capabilities.

Instead, the ability to easily switch rosettes is a design feature for this machine. Other unique features for this machine include:

1. The ability to easily change the phasing of the rosettes (vs. the object) without having to perform any calculations.
2. The ability to change the alignment of one rosette against another.

So, if you are new to ornamental turning, this machine will enable you to pursue your artistic endeavors easily and without having to spend great amounts of time learning how.

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

Where can I learn more about ornamental turning?

There are a number of great good options:

- Join the [Ornamental Turners International](#). There is a forum on the web site which allows for questions to be posed and are typically answered relatively soon.
- Attend the Ornamental Turners International Symposium. There, you will meet many other users of the MDF rose engine lathe.
- Check out the [Ornamental Turning Book of Knowledge](#). There is also a list of additional resources on that site.

What Do I Need to Get Started?

An MDF rose engine lathe consists of just a few parts, but we have broken up those parts to make it configurable for what you might want to do. The following questions are designed to help you get to the right answers for your situation.

0 Do you want to buy an off-the-shelf system with nothing required by you to get it up and running?	Yes	Used MDF rose engine lathes do become available from time to time, but not too often. Otherwise, you will need to build one as new MDF rose engine lathes are not sold as an off-the-shelf system. If this is a must for you, look at other options. There are some good ones, and they are listed at Buying a Rose Engine Lathe on the Ornamental Turning Book of Turning .
	No	Move on to question 1.

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

<p>1 Do you already have one of the original MDF Rose Engine Lathes?</p> <p>(and are willing to cannibalize it for parts)</p>	<p>Yes</p>	<p>Many of the key parts can be moved to the newer design. This includes the</p> <ul style="list-style-type: none"> • Spindle and spindle bushings • Rosette flange • Pivot points • Rubber & rubber parts • Bungee & bungee parts • Rosettes <p>If you added the stepper motor drive to your machine, those parts can be transferred over also. This includes</p> <ul style="list-style-type: none"> • Stepper motor mounting bracket with idler and bracket attachment hardware • Spindle pulley • Spindle stepper motor pulley • Spindle drive timing belt • Stepper motor • Stepper motor controls
	<p>No</p>	<p>You will need the Base System Kit.</p>
<p>2 Do you want to cut the MDF parts yourself?</p>	<p>Yes</p>	<p>Follow the directions outlined in the book to the right.</p> <p>You can get this document at https://mdfre2.colvintools.com/.</p>
	<p>No</p>	<p>You will need to buy the pre-cut items in the Case Kit.</p>

MDF Rose
Engine
Lathe 2.0

**Base & Headstock
Instructions for Building**

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

3 How do you want to drive the spindle?	Spindle Stepper Motor	<p>You will need to buy the Controls Kit - Spindle Stepper Motor. This kit provides all the parts needed to attach the stepper motor to the headstock, and to drive the spindle.</p> <p>The other parts you need, and directions to assemble it are outlined in the book above. You can get this document at https://mdfre2.colvintools.com/</p> <ul style="list-style-type: none"> • This option is very easy to use. • Stepper motors deliver consistent torque even at very slow speeds (minutes / revolution). • It is much lower cost than the option for multiple stepper motors. • If you take this option, most of the parts are reusable if you later decide to go with the multiple stepper motors option. 	<div> <div>MDF Rose Engine Lathe 2.0</div> <div>Control System for Spindle Stepper Motor Instructions for Building</div> </div>
	Spindle Stepper Motor, and coordinate another axis	<ul style="list-style-type: none"> • Consider this option if you want to add a spherical or a curvilinear slide and have these controlled using a stepper motor. • This control system will control these and coordinate the movement with the spindle. • This system gives an amazing number of options; probably more than a person will master over many years. But that means it can be more difficult to learn to use. <p>Go to question 3b</p>	
	Other	<p>If you want to design your own spindle drive system (e.g., a gear-driven motor), then do as you wish.</p> <p>Go to question 4.</p>	

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

3b Multiple Stepper Motor Controls: Do you want to build the system yourself?	Yes	Follow the directions outlined in the book to the right. You can get this document at https://mdfre2.colvintools.com/	<div> <div>MDF Rose Engine Lathe 2.0</div> <div>Control System for Multiple Stepper Motors</div> <div>Vol 1 - Instructions for Building</div> </div>
	No	We offer a kit of hard-to-obtain parts . You will need to buy the Controls Kit - Multiple Stepper Motors .	
4 Do you have the need for a drilling frame?	Yes	Generally, a cutting frame is used, but you could use a drilling frame . If you are just getting started, I recommend you use a cutting frame.	
	No	If you don't need a drilling frame now, then I recommend you start with a cutting frame. You can add a drilling frame later.	
5 Do you expect to have multiple cutting and/or drilling frames?	Yes	Consider an Overhead Drive , approach. Jump to question 5a.	
	No	Take a look at the universal cutting frame offered by Mandala Rose Works (they also offer a drilling frame complete with collets). These have an integrated motor and are lower cost for a single item. There is a cost advantage for an Overhead Drive when using it with multiple cutting frames or drilling frames. And there are other advantages to using one. These are outlined in the link above to the Ornamental Turning Book of Knowledge .	
5a Do you want to build your own overhead drive?	Yes	Jon Magill wrote an article on how to do this for the AAW .	
	No	You will need to buy the <ul style="list-style-type: none"> • Overhead Drive Kit • Variable speed motor. You will need to order this item separately from Penn State Industries. The item needed is the Variable Speed Midi Lathe Conversion Kit, p/n TCLVSKIT2 	

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

5b Do you want to make your own cutting (or drilling) frame?	Yes	Bill Ooms wrote a great set of instructions for building these. His web site is Ornamental Turning Chucks & Cutting Frames .
	No	You will need to buy one. Consider one of these: <ul style="list-style-type: none"> • Universal Cutting Frame from Brad Davis • Universal Cutting Frame from Lindow Machine Works
6 Do you think this is a hobby you will be doing for a while?	Yes	You will need a cross slide (AKA, an X-Y table) and a tool holder. I recommend you go with the ones below from www.LittleMachineShop.com . <ul style="list-style-type: none"> • X-Y Table, p/n 2008 • Quick Change Tool Post, p/n 4701 • Tool Holder, p/n 2281 <p>The X-Y table will need to be raised so that it can reach the spindle. For that follow the directions outlined in the book to the right. You can get this document at https://mdfre2.colvintools.com/.</p>
	Not sure	Consider using a drill press cross slide vice. It isn't great but will get you up and running. And the cost is 1/3 of the other approaches.

MDF Rose
Engine
Lathe 2.0

Base & Headstock
Instructions for Building

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

Spindle

May I get a spindle with spindle threads of 1 1/4"-8 (or M33)?

The kit as designed with a Morse Taper adapter which is we are offering either 1"-8 or 1 1/4"-8. There are good adapters available, and the user can certainly look into those.

May I get a spindle with a Morse taper?

This is being catered for in the design.

Spindle Drive

Do you sell a kit with the hand crank as an option?

Haven spoken with a large number of MDF rose engine lathe users, all have motorized the spindle drive. Many have used geared motors with the speed controlled by changing the frequency of the power feed. Whilst that works, it is problematic at slower speeds as torque is lost. So the hand crank gets used when cutting at very slow speeds (e.g., when making the final passes on a cut).

Stepper motors provide a much better option as they maintain torque when running across the speed range used on the rose engine lathe. And, using stepper motors ensures a constant rotational speed at slower speeds, speeds measured in multiple minutes per revolution.

Do you sell a kit which accommodates multiple stepper motors?

There are two options at this time:

- A controls kit which implements a spindle stepper motor, or
- A controls kit which will control up to two stepper motors at the same time: The spindle stepper motor and one other. These are outlined in the user manual (which is available on-line in the [MDF Rose Engine 2.0 Library](#) and kept up to date).

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

Can I get a different sized (or different amperage) stepper motor in my kit?

That is not an option we support at this time. The supplied kit is designed to work along known parameters. You are certainly welcome (and encouraged) to experiment.

Can I use a different sized (or different amperage) stepper motors?

The standards around which the system is developed are documented, and those are available on-line in the [MDF Rose Engine 2.0 Library](#).

Can I get a different stepper motor controller or driver in my kit?

That is not an option we support at this time. The supplied kit is designed to work along known parameters. You are certainly welcome (and encouraged) to experiment.

Can I use a different stepper motor controller or driver?

The kit has been designed to easily utilize a very cost-effective approach to having a stepper motor drive the spindle. If you want to use a different controller or driver, you may, and are welcome to experiment.

MDF Rose Engine Lathe 2.0

Frequently Asked Questions

To the extent that material may appear to be infringed, we assert that such alleged infringement is permissible under fair use principles in U.S. copyright laws. If you believe material has been used in an unauthorized manner, please contact me at ColvinTools@Gmail.com.

Portions of this document are copyrighted by Jon Magill and are used with his permission.