

World of Woodturners
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Place Taken: Bothell, WA
Derry Hollowing Rig
Date Taken: 10/23/04

Posted By: [Molly Winton](#)

Date Posted: Oct 23, 2004

Description: Above is a photo of the primary reason (or at least the excuse) for Jack, Don, and I to get together. Don makes a great hollowing rig with lazer guide for medium sized hollowing. Jack and I took it for a spin and quickly each purchased one. We met in Jack's shop for the afternoon and had a wonderful visit. I hollowed a form to 1/8" thickness in a matter of minutes with no worry of blowing it up. It was SWEET!

[Juergen Schleicher](#)

Oct 23, 2004

Molly

What kind of a cutter is at the working end of the stabilizer?

Bob Elliott

Oct 23, 2004

Molly,

Judging by the present position of the tool, it doesn't look like you were using the Don Derry /method/...reverse (direction) hollowing.

Molly Winton

Oct 23, 2004

Juergen the cutter is a 3/16" (I think) square bit rounded at the cutting end. The bit is attached to the squared bar at a 45 degree angle. What makes this such a good system is the torque arresting toolrest, and the placement of the lazer. Adjustment of the lazer is extremely quick and easy to adjust for the placement of the cutting tip to match the curvature of the piece. You're right Bob, this set up (Jack's lathe), and the one I used today (my traveling Jet Mini) were set for the forward rotation. The rig I brought home is reconfigured for reverse turning. Don got me hooked on this method some time ago, and when at all possible I only hollow in reverse.

Lyn Mangiameli

Oct 23, 2004

Yes, one of the very best restrained/laser guided hollowing systems,
and the very best moderately priced one, IMO. Very nicely integrated
and balanced. I've got a full review of this system in the works, which
should be out in a month or two after the last segment of the Survey
of Hollowing Tools is published. Anyway, how can one pass up the
fun coloring on the handle. :-)

Molly Winton

Oct 23, 2004

Lyn, Don mentioned your favorable opinion on this rig. I think that's pretty high praise given the extent you have gone to reviewing so many of the hollowing devices on the market. I think one of the great values you bring to this vocation/avocation is your thorough analysis of tools on the market. I look forward to your detailed review of this one.

Mike Swain

Oct 24, 2004

Hi Molly,

Do you have any photos or physical dimensions of Don's rig, especially the business end?

I have on test as part of a review a number of hollowing rigs from around the World and Don's rig has a different appearance to the others.

Regards...Mike

Gary Martin

Oct 24, 2004

How would one go about purchasing one of these?

Herman de Vries

Oct 24, 2004

Amazing! I've had this exact set up drawn on a sheet of paper several times and just never got around to making it. I never liked the complex and complicated rear rest set up and wanted something simpler and something that would allow me to use the bar freehand if I chose. I also wanted something that would not require an extension on the bed. Don, I guess we think alike.

The two things that I wondered about were - does the torque ever cause the bar to bind in the tool rest, and does the width of the tool rest help in keeping the bar at center point on the turning?

Also, does the laser light require such a heavy set up? It looks like the light support is made of the same stock as the boring bar.

Thanks for posting this. It has given me new resolve to get down to my brother's welder and got to work.

Herm

Molly Winton

Oct 24, 2004

Mike, Gary, and Herm, I'm going to let Don answer your questions, since it is his creation. I've emailed him to let him know there are questions about it. Gary if you email Don (he's a Wowie), he'll get you set up. I just used mine again today, and really like it.

Pascal Oudet

Oct 25, 2004

what Herm, are you leaving us for the Dark Side of the Force ? (read arrested hollowing system)

Herman de Vries

Oct 25, 2004

Dinyar, the 'ol bod can only take so much. I rough hollowed a 30 incher a few weeks ago. It already had a decay hole in the center of it that went about 3/4 of the distance. However, the hole was off center, so every time the piece came around the ring cutter would momentarily cut and then it would be free for half the rotation. "Thump, thump, thump". My underarm (I tuck the handle under my arm) was black and blue. Normally, on a regular cut in firm wood it just slices, unless there's a knot in there and that can be interesting.

Actually, it was the challenge of coming up with a new and different design (which Don has) and building it that really was attracting me. As long as I can I will use the freehand method. It's very challenging and I get a workout at the same time.

Now - by the Dark Side, did you mean the Stubby? I am looking into it, but the prices are starting to scare me off. I am happy with my General about 90% of the time and that's probably good enough. A Stubby 750, which is not big enough, is \$7500 Canadian. I just bought a new car, and that's probably enough toys for awhile. :))

Molly, looking forward to hearing from Don.

Pascal Oudet

Oct 25, 2004

Herm, with Dark Side I meant the "hollowing rig" users club, versus the "freehand hollowers". but I understand sometimes it's just much easier to used an arrested system.

Don Derry

Oct 26, 2004

Hi everyone and thanks for you all taking such an interest in the hollowing system. Before I get to the questions let me first give credit where credit is due. The original concept for this design came from my friend Ron Gerton. I ask him if I could develop what he designed, for his daughter, into a system that would work on a mini lathe and he graciously agreed. I did this so I could afford to lend

the tools needed to teach beginners how to hollow turn. I felt it was important to be able to offer this satisfying aspect of our craft without a person needing to invest in the tooling. This works very well and I actually taught a woman to make a small hollow form in one day, who had virtually never used a wood lathe before. You may have seen this referred to on WOW a few weeks ago when I did a work shop in Oregon.

The brass laser head is my own invention and solves many issues dealing with convenience and stability of adjusting the laser. I didn't like the bulk, trial and error methods and the bouncing laser dot that most systems settle for. I solved these problems by making an adjuster with an X,Y axis. It has micrometer like adjustments that needs no set screws to hold it in place. When it is set it stays put and does not dance all over the place. Even the momentary switch of the laser is held on by simply turning the laser a quarter turn in the holder.

Bob, you are correct, I do prefer to teach hollowing with the reverse rotation of the lathe as I find it far more ergonomic whether you use a hand held bar or use a captured system. Not everyone has reverse rotation so the tool is ambidextrous and it is easily switched to what is considered normal counterclockwise rotation. Even though I designed the system to work on a mini lathe it works just as well or better on larger machines. The only difference is the size of tool post that can easily be changed from one size to another by the use of a machine screw. The capacity of the rig is the more important specification. The rig will turn a hollow form that is 9 inches deep and 10 inches in diameter. It is a very intimate tool to use. I like to put it this way it has all the freedom and benefit of a hand held hollower but none of the risk or punishment. Since everything is in front of you there is nothing to get in your way or tool fixture to adjust once you start hollowing.

Juergen, the system uses a 3/16 inch high-speed steel machine tool bit that is super-glued into a square broached hole. I like this better than grub screws. It is a simple matter to heat up the tool bar and change the bit.

Herm, no the bar does not bind up under torque. The logic

is simple and it may be the only time that vibration is a true benefit in woodturning. As the tool inevitably vibrates it loads and unloads the bar hundreds of not thousands of times a second. This allows the bar to float between the cycles and moves very freely. This gives the added benefit of being able to go deeper, with a given size bar, than other captured systems. The tool, arrests not only the torque it, also keeps the cutter in plane with the center point. The device that holds the laser is not as heavy as it looks. It is made of high tolerance telescoping polished brass tubing and is the real heart of the system. Its user friendly adjust-ability along with its solid laser stability make it a joy to use.

Herm, I agree that a person gets a REAL workout and satisfaction from hollowing by hand, but that workout was a big part of putting me in the hospital with a repetitive motion injury so severe they gave me narcotics for my pain killer. This was another motivator for the tools development.

Gary, Please email me at donald@donaldderry.com and I will be happy to give you or anyone else further info on the rig and how it can be purchased.

Thank you all for giving me the opportunity to share some background on what has become a very satisfying, still ongoing R&D project.

Jamie Donaldson

Oct 26, 2004

I'm curious about the comments about "reverse turning"- do you mean the lathe is rotating clockwise in this example? Why is the laser on this side, and how is the cutting bit oriented? If the boring bar/tool holder is rattling about in the capture brace then the chance of a catch would be greater, and the noise very objectionable? 'splain me?

Don Derry

Oct 27, 2004

Jamie,
In the picture the rig is set up for normal counter clockwise rotation. I prefer hollowing with the reverse rotation of the lathe as I find it far more ergonomic whether it be a hand held bar or a captured system. The tool

is ambidextrous and it is easily switched to what is considered normal counter clockwise rotation.

The tool does not rattle around in the capture gate. You have extremely fine control of the clearance between the bar and the gate by adjusting the cap screws on the top, literally to a thousandth of an inch.

As far as catches go, they are virtually non existent because of the rigidity built into the system. When hand holding a bar you can get disastrous catches because of the relative weakness and play in the shock absorber of your arm.

I don't find the noise any more apparent or objectionable than other wood turning operations. It is actually a very pleasant experience compared to the white knuckle, tension headaches I could get from hand held hollowing.

Dinyar Chavda

Oct 27, 2004

Jamie:

I got the Jamieson rig recently, and, in his video, he deliberately jams the tool into the wood (says he gives people a heartattack when he does that in his demos), and, so long as the tool obeys the 90degree rule, it will not jam. At least, that's what he says---that was before he met me--he might have to put a caveat in the video about crazy Indians!

Dinyar

Alfred Mirman

Oct 27, 2004

Hi

Looking at the Don Derry small hollowing system, I have two questions:

- 1- How does this system enable smooth movement of the boring bar between the stabilizer plates and
- 2- What is the size of the boring bar

Mike Schwing

Oct 27, 2004

Please help me understand this "reverse turning". I still don't get it even after it was explained to Jamie. Looking at this photo, I would assume the lathe rotation was counter clockwise when standing facing the top of the workpiece

pictured, with the right hand on the long handle and the cutting taking place on the side closest to the "front" of the lathe.

I have a captured system with a laser and if I tried to turn the lathe direction to reverse, cutting would take place on the other side and I could not observe the laser as it travelled around the opposite side of the workpiece.

The only way I can think that this setup could work in reverse turning fashion is if the cutters were "upside down"? Have it got it right? If so, where is the real advantage? I'm already cutting on that side, with the same hand/body arrangement.

I'm so confused!

Don Derry

Oct 28, 2004

Alfred,

The logic, of the bar's movement, is quite simple and may be the only time that vibration is a true benefit in woodturning. As the tool inevitably vibrates it loads and unloads the bar hundreds of not thousands of times a second. This allows the bar to float between the cycles and it moves very freely. This gives the added benefit of being able to go deeper, with a given size bar, than other captured systems. The bar is made of half inch square steel.

Mike,

Sorry for the confusion, the setup, as shown in the picture is on Jack's lathe and we set it up for normal clockwise rotation. In this case the laser and the cutting tip are both on the same side and cutting will take place with normal counter clockwise rotation. The orientation of the cutter and laser will be just like you are used to. Jack is considering using the system to teach hollowing to beginners, like I do, so he wanted to get comfortable using the tool with forward and reverse rotation. The system is completely ambidextrous and can easily be set up to turn either way.

On most small turnings you can see the laser dot quite well even on the backside while using reverse rotation. But, if it becomes difficult to see the dot than you simply place a mirror on the backside and use the reflection of the dot to guide yourself. This is not as weird as it sounds. there is no parallax or reverse image to worry about. It is just

like watching the dot on the work itself.

The ergonomic advantages of reverse rotation are incredible. No more need to sit on your bed ways. You never have to lean over the lathe again or have to set the tooling up on the outboard side of the lathe to make an inside cut. You get to stand with your shoulders square over your feet with complete balance and control. I have to admit that any captured system takes so much strain out of the process that this isn't as big an issue. But all you hand held hollowers should all be using reverse rotation. You will loose far less work and your body will last much longer.

Ken Grunke

Oct 28, 2004

I wonder if having the toolbit upside-down, cutting on the backside with normal lathe rotation would be better. Or is this what you mean, Don? It wasn't clear to me. I'd think it would be too easy to unscrew a chuck or faceplate with the lathe in reverse, and with the vibration.

Mike Schwing

Oct 29, 2004

Thank you Don. I have, of course, another question. The same thing can be achieved by standing on the other side of the lathe while hollowing, right? I do this frequently, until I can't see the laser any longer (I'm short), and then I move over to the normal side to finish hollowing. If I can learn to employ your laser/mirror technique, I think I'll wind up doing all of my hollowing from the opposite side.

I don't believe my Kelton hollowing tools would allow me to set up in "reverse" fashion as you describe due to their curvature, and that is why I moved over to the other side in the first place.

Don Derry

Oct 29, 2004

Ken

I have never tried what you suggest but it would probably work. However, I think it would be always best to direct force into the mass of the machine when possible. As for the work unscrewing off of the spindle, let me say that this has not been a problem in the hundreds of hollow forms I've turned. It is true that you have to make sure that the faceplate is firmly torqued onto the spindle but it is well

within the specifications of the threads to hold it. Actually it may be better if it did unscrew. That way the energy of a disaster would have a controlled way to dissipate rather than the explosion that is more common.

Mike

You must be left-handed. I tried standing on the other side of the lathe but it felt VERY awkward for me as I am right-hander. All of my grips had to switch to my weak side and then I found all my tools and routines were on the wrong side of the lathe. I jury rigged a mirror by putting it on to an old elbow lamp. This allowed me all the adjustability I needed. Try it, you'll find it a no-brainer to adapt to.

I don't know about the Kelton, If it's like most of the hooded hollowing tools then you are right it probably can't be turned over. This is too bad I believe all tools should be made for right-handed and left-handed users and their techniques.

Mike Schwing

Oct 29, 2004

Don, I'm about as ambidextrous as they come, but I do throw better left handed. Eating, writing, etc... everything else, just about equal with both hands. I even use the mouse with the left hand on my home PC and the right at work. Absolutely equally adept with both.

Guilio Marcolongo

Oct 29, 2004

Hi guys

Where has the art of true hollow form turning gone .I see Jigs with lazars and the like .I feel that useing jigs like the one presented is not true hollow form turning .If one was called to demonstrate hollow form turning and left his jig home what would be the outcome ?

Please do not get upset with my question .I watched John Jordon and Mike Mahony Physically manover their tools to achieve their goal of making a hollow form .

To me that is true hollow form turning .

Guilio Marcolongo

Don Derry

Nov 14, 2004

Hi Guilio,

Forgive me for not responding to you sooner. I am now just

getting caught up after a trip to the SOFA Sculpture show in Chicago. www.sofaexpo.com <<http://www.sofaexpo.com/>>

As for, "Where has the art of true hollow form turning gone". It has been channeled to where it should be. It is now in the expression of ideas and concepts and away from the very satisfying but mundane process of removing sawdust. Art is not in the process but rather what you do with the process.

Extending your point of view would demand that we not call ourselves "true wood turners" unless we all go back to bodgering on a pole lathe, out in the woods. After all, the electric motor made the process of rotating wood faster and easier therefore it should not be considered "true woodturning".

Other consideration are safety and accessibility. I learned to hollow turn using free held boring bars over a tool rest like you did. It put me in the hospital and greatly complicated several repetitive motion injuries I was developing. Not everyone is as strong (or as good-looking) as Mike Mahoney and John Jordan. So my question to you is; Is a vessel hollowed with captured tools, by a petite woman or a man in a wheelchair somehow not a "true hollow form"?

Please don't get upset with my question. I too have great respect for those who choose to develop the broadest skills with a particular process (the key word here is choose). But, true hollow form turning can now be done at consistently higher quality and is accessible to more people because of this technology. It will only help our field to grow and become stronger.

