Oval turning demonstration (January 2, 2015) Dale Larson

I will be demonstrating the Vicmarc oval turning chuck. This chuck was designed in Germany by Mr. Volmer and is made in Australia by Vicmarc. The chuck threads onto the drive spindle and is clamped to the bed of the lathe. The chuck is height adjustable. Measurements for the oval turning are in metric. It goes from zero offset to 30 millimeter offset. At 30 mil offset the turning will be about 4 5/8" longer than wide. This is the maximum difference attainable with this chuck. Be aware that the oval shape changes with the size. For example these are all rough 30 mil offset ovals: 3" x 8", 8" x 13" and 13" x 18". 13" x 18" is the maximum size that can be turned on a 20" lathe. I find that 25 offset ovals are the most pleasing shape.

Oval chucks have been around for hundreds of years. They are used to turn oval picture frames. Here are the issues that make oval turning challenging: The oval picture frames are turned using scrappers generally making cuts parallel to the face of the chuck. These cuts are easy. Making cuts perpendicular to the face of the chuck are hard. Using a gouge is hard because "riding the bevel" is not possible on an oval. This is because the chuck manipulates the wood so that at 9 o'clock the wood is smooth. The Germans call this "the point of tranquility" which is a good term. Every other point on the turning is a big blur except 9 o'clock. The tool has to cut the wood at 9 o'clock. And this point is about a pencil line thick and if you get off of it your tool will start to bounce.

The taller the bowl form you turn the harder the cuts on the inside. As mentioned before, turning frames or platters would be fairly easy. Turning a 5" deep bowl is hard. This is because the inside walls are approaching perpendicular to the face of the chuck. Turning the outside of the oval is fairly normal turning. The inside is where the trouble is. At this point the turner has two options. You could go to a captured bar system and set it to cut right at 9 o'clock. The plus here is that you would get a perfect oval shape. The negatives are that you would have massive end grain tear out that would be hard to sand out and you would not gain any turning skills. The second option is to use a bowl gouge and try to keep to 9 o'clock. You'll get a clean end grain cut but the walls will not be smooth requiring power sanding to smooth down. Your choice.

The closer to round the oval shape is the easier it is to turn. Thus a 15 off set oval- about 2 ¾" longer than wide is easier to turn than a 30 offset oval, 4 5/8" longer than wide. The last issue is that the closer you get to the center of the oval the harder the gouge is to use. In an oval there is no "center." The center is a straight line equal to the offset. In a 30 offset that line is 4 5/8" long and at "center" the wood is not going round, it is going straight up and down. Thus the closer to center the tool gets the more radical the wood movement.

As for turning ovals I have learned to do as I do with green turning bowls. I rough out the oval out of wet wood. I dry the blank and finish turn the dry blank. I also do as much turning as I can on the "round" lathe when hollowing out the center of the oval and use the oval chuck to do the final oval shape.

For further reading you can go to Mr. Volmer's website and watch his videos.

http://www.volmer---ovaldrehen.de/englisch.htm