

The Chart Inches..

Layer Dia	Seg Width							
	6	.8432		4	.5622	8	1.124	
	6-1/8	.8608		4-1/8	.5797	8-1/8	1.142	
2-1/4	.3162	6-1/4	.8784	4-1/4	.5973	8-1/4	1.159	
2-3/8	.3338	6-3/8	.8959	4-3/8	.6149	8-3/8	1.177	
2-1/2	.3514	6-1/2	.9135	4-1/2	.6324	8-1/2	1.195	
2-5/8	.3689	6-5/8	.9311	4-5/8	.6500	8-5/8	1.212	
2-3/4	.3865	6-3/4	.9487	4-3/4	.6676	8-3/4	1.230	
2-7/8	.4041	6-7/8	.9662	4-7/8	.6851	8-7/8	1.247	
3	.4216	7	.9838		5	.7027	9	1.265
3-1/8	.4392	7-1/8	1.001	5-1/8	.7003	9-1/8	1.282	
3-1/4	.4568	7-1/4	1.019	5-1/4	.7378	9-1/4	1.300	
3-3/8	.4743	7-3/8	1.036	5-3/8	.7554	9-3/8	1.318	
3-1/2	.4919	7-1/2	1.054	5-1/2	.7730	9-1/2	1.335	
3-5/8	.5095	7-5/8	1.071	5-5/8	.7905	9-5/8	1.353	
3-3/4	.5270	7-3/4	1.089	5-3/4	.8081	9-3/4	1.370	
3-7/8	.5446	7-7/8	1.107	5-7/8	.8257	9-7/8	1.388	

The Chart Metric..

Layer Dia	Seg Width						
60mm	8.432	12	1.686	18	2.529	24	3.373
65	9.135	12.5	1.757	18.5	2.560	24.5	3.443
70	9.838	13	1.827	19	2.670	25	3.514
75	10.541	13.5	1.897	19.5	2.740	25.5	3.584
80	11.243	14	1.968	20	2.811	26	3.654
85	11.946	14.5	2.038	20.5	2.881	26.5	3.724
90	12.649	15	2.108	21	2.951	27	3.795
95	13.351	15.5	2.178	21.5	3.022	27.5	3.865
10 cm	1.405cm	16	2.249	22	3.092	28	3.935
10.5	1.476	16.5	2.319	22.5	3.162	28.5	4.005
11	1.546	17	2.389	23	3.232	29	4.076
11.5	1.616	17.5	2.459	23.5	3.303	29.5	4.146
				30	4.216		

18-4 plate Segment Width= diameter / 7.1154



the SegEasy Plate User Guide 18-4 M

A Word...

The Seg-Easy plate is a simple and easy way to make open segmented vessels. The 18-4 plate accepts eighteen segments and has a 4 degree gap. The miter angle is 8 degrees.

There are many ways to use this creative tool. A good reference is "Segmented Turning" by Dennis Keeling, Taunton Press in the U.S. and "Segmented Turning a Practical Guide" by GMC publications in the U.K.

You can see a few of Dennis's projects at www.dkeeling.com and mine at www.jerrybennettart.com.

Jerry Bennett

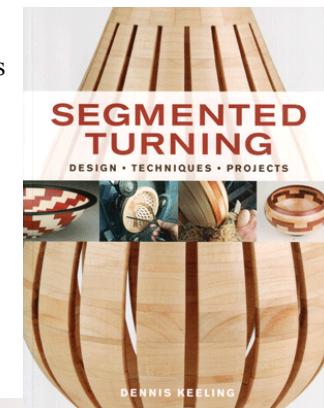


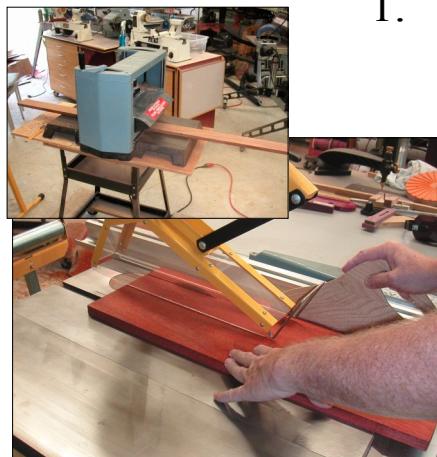
Plate Assembly...



For the required stiffness, attach the SegEasy plate to a 3/4" thick piece of MDF or plywood cut to the same diameter as the plate. Use #6 x 3/4" flat-head wood screws to attach the plate to the MDF.. Drill a 1/8" center hole through the MDF disk. This hole must be absolutely perpendicular or alignment errors can occur when gluing the segments. Use the drill bit as a pin to align the SegEasy Plate with the MDF. Drill the holes for the #6 x 3/4" flat-head screws with a self-centering bit and attach.

Safety Caution: *The SegEasy Plate is for assembly only and is not designed for use under power. Improper use could result in injury.*

Step by Step...



1.

Material preparation is one of the most important tasks. Plane material to the desired thickness and rip into the required strip widths. Be sure to add 3 inches or so in length for safe handling while cutting segments. If your planer is snipe-prone like mine, just exclude that part of the board. Mark the layer number on the end of each strip.

The examples show the 24-4 plate. The procedures are the same for all plate configurations.

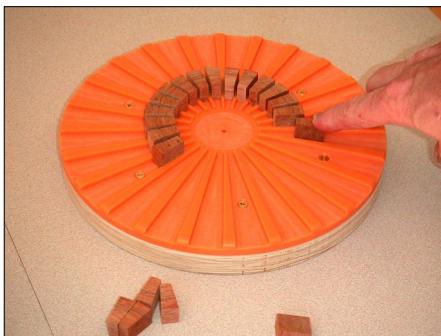
2.

The segments do not have to be perfect. They just have to fit snugly in the plate. Cut a test segment from a wide board and adjust the angle for a tight fit. Doing it this way, you do not have to worry about the degrees.



3.

As the segments are cut, put them in numbered bags. Remember to cut a few extra.



4. Put a layer of segments into the plate snugly. They will stay in place with normal handling. With larger and heavier segments, a rubber band may be necessary.

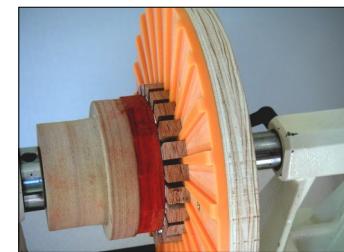
5.

Position plate on tailstock pin and locate segments forward against the previous layer. Mark glue line. This is a good time to make sure each segment is flat. They will be if the thickness is correct. You did cut extras ... Right?



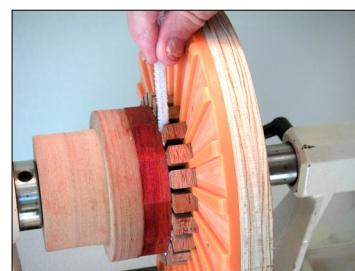
6.

Apply glue up to the glue line with a small brush. I use regular Titebond glue which sets rather quickly. A slower setting glue will slow down the process.



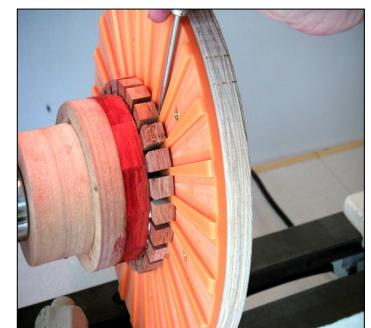
7.

Place plate back on the lathe and tighten just enough to set the glue.



8.

For quick, easy glue cleanup between segments, I use damp pipe cleaners. If they are too wet, the glue will be washed out of the bond area. Some prefer to use a needle file to remove the glue after it dries.



9. Let the layer dry for 10 to 15 minutes. Then, remove the plate by gently prying it free from the segments with an awl. If a segment comes loose, simply replace it by eye and allow a little more drying time on subsequent layers. The release time is dependent upon the setting time of the glue.