



Lake Erie Toolworks ClampGAUGE Instructions

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www.lakeerietoolworks.com

Very Important – Please Read!

Read all instructions prior to using the Lake Erie Toolworks ClampGAUGE System to ensure full knowledge of how to use this tool. Also, please follow all proper safety rules and guidelines as appropriate when using any woodworking tool to prevent bodily injury.

ClampGAUGE Kit Contents: (Quantity of A, B & C Size ClampGAUGES vary by kit)
“A” Size – (Apprentice Kit = 1-A Set), (Journeyman Kit = 2-A Sets), (Master Kit = 3-A Sets)
“B” Size – (Apprentice Kit = 1-B Set), (Journeyman Kit = 2-B Sets), (Master Kit = 3-B Sets)
“C” Size – (Apprentice Kit = 2-C Sets), (Journeyman Kit = 3-C Sets), (Master Kit = 5-C Sets)
Retention Bands = Supplied with each ClampGAUGE kit
Clamp Chart = Chart provided for each kit type or ClampGAUGE Calculator (available online)
Note: You’ll notice a few marks on the corners of each ClampGAUGE. These are called “racking marks” and are where the ClampGAUGES were held during the hard coat anodizing process. Also, there may be slight color variations due to the anodizing process. This is typical and does not affect the function of the ClampGAUGE System.

Recommended Tools:
Wood Glue
Deadblow Mallet
¾” Pipe Clamps or Heavy Duty I-Beam Style Bar Clamps or Bessey Revo Parallel Jaw Clamps
Note: Other Clamp Styles such as Aluminum Bar and One-Handed Clamps are not compatible with the ClampGAUGE System as they do not develop enough clamping force
Optional Tools:
Wooden clamping cauls
Smaller clamps for aligning ends of boards together

Disclaimer: Woodworking is inherently dangerous and Lake Erie Toolworks cannot be held responsible for any injury to person or property arising from installation, use or misuse of our products.

Note: You can view ClampGAUGE System Awareness, Training and Usage videos that are available in the Install/Video section of our website at www.lakeerietoolworks.com

Step 1

Determine the thickness and length of the boards that you are gluing up.

- The Apprentice kit works for 3/4" thick panels up to 48" long, 7/8" thick panels up to 40" long and 1" thick panels up to 36" long.
- The Journeyman kit works for 3/4" thick panels up to 80" long, 7/8" thick panels up to 70" long and 1" thick panels up to 60" long.
- The Master kit works for 3/4" thick panels up to 120" long, 7/8" thick panels up to 108" long and 1" thick panels up to 96" long.

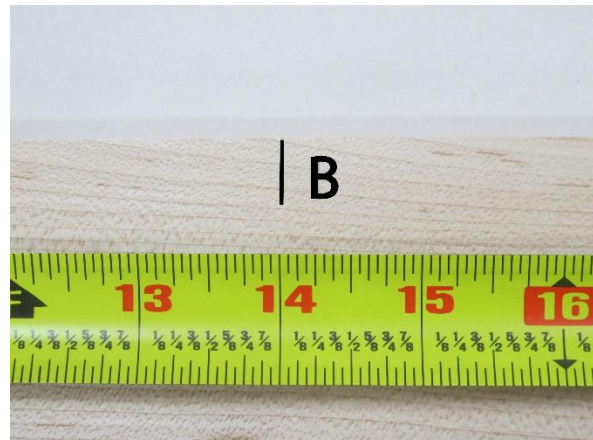
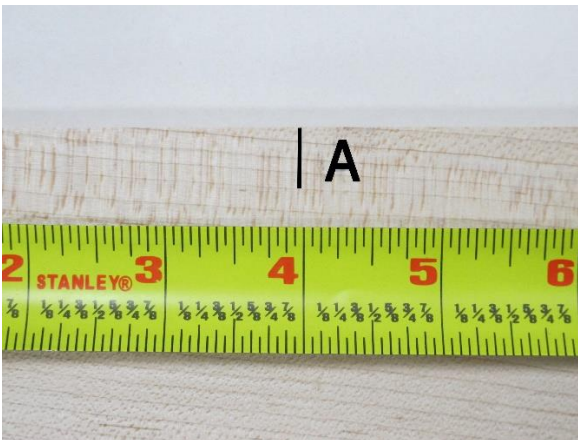
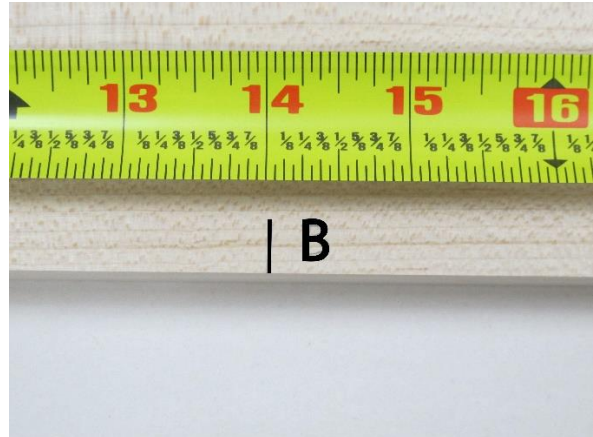
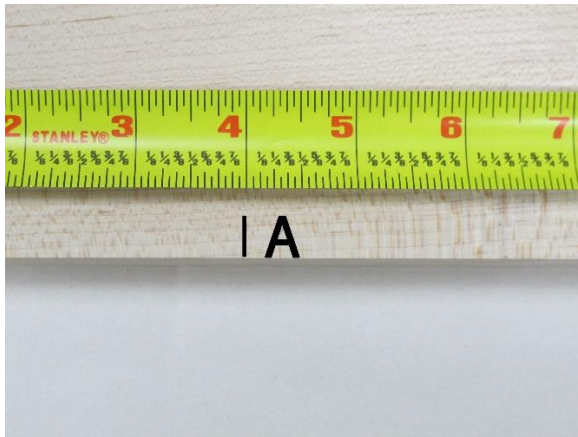
Step 2

Look at the appropriate chart for the board's thickness and find the length in the left-hand column. The next set of columns will tell you which size and how many ClampGAUGEs to use. For example, a 3/4" thick, 19" long panel calls for 1 size 'A' ClampGAUGE and 1 size 'B' ClampGAUGE. The right-hand set of columns corresponds to the proper positioning of the ClampGAUGEs as measured from the end of the board. *(Note: You can also use the new ClampGAUGE Calculator software available for download via our www.LakeErieToolworks.com website for Windows PC, MAC, HTML, Android & iOS).*

Apprentice Kit Chart - 3/4" Thick Boards							
<i>Note: All Measurements In Inches - Revision: 4/1/2017</i>							
* Round actual board length to nearest inch for best positioning							
Board Length	Quantity & Type of ClampGAUGEs			Center Distance From End Of Board			
Length	A	B	C	A1	B1	C1	C2
7				3.5			
8	1			4			
9		1			4.5		
10		1			5		
11			1			5.5	
12			1			6	
13			1			6.5	
14			1			7	
15	1	1		3.5	10.5		
16	1	1		3.5	11.5		
17	1	1		4	12		
18	1	1		4	13		
19	1	1		4	14		
20	1		1	4		14	
21		1	1		5	15	
22		1	1		5	16	
23			2			6	17
24			2			6	18

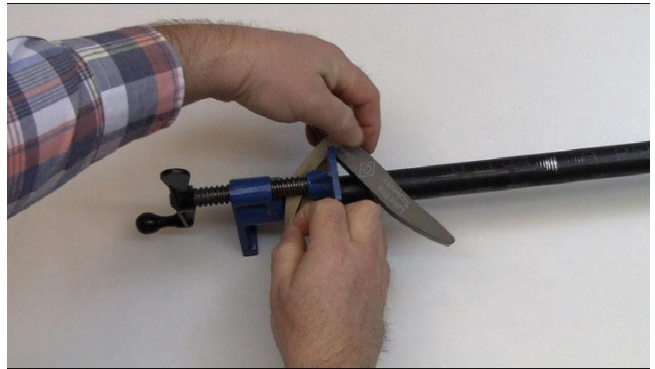
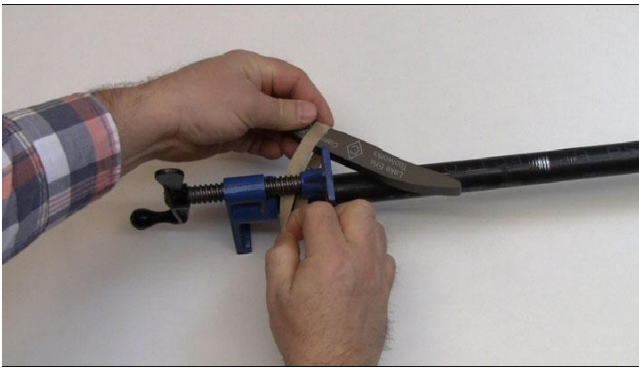
Step 3

Using a tape measure, start on the left side of the first board in the glue-up (the edge that will be squeezed by the moving jaw of the clamps) and mark off these distances as well as which ClampGAUGE size to use. For example, a $\frac{3}{4}$ " thick, 19" long board will have center marks at 4" for the 'A' ClampGAUGE and 14" for the 'B' ClampGAUGE. Also, mark the outside of the opposite board in the same manner.

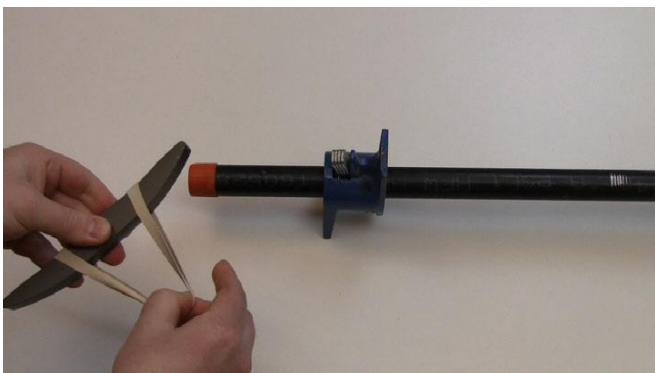
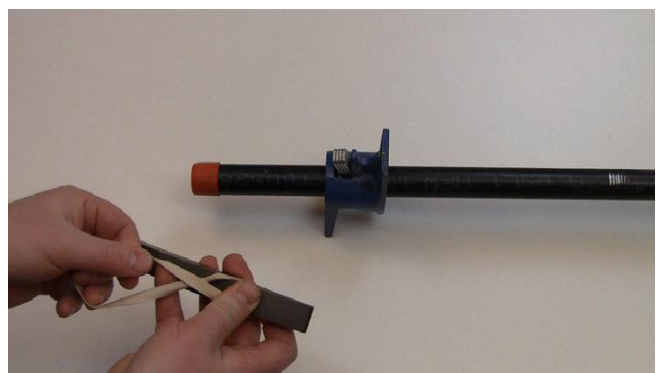
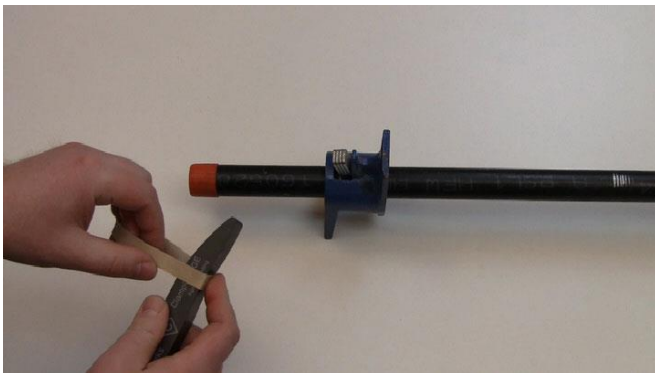


Step 4

Connect the ClampGAUGES to the clamps with the included retention bands. For the moving end of the clamp, loop one end over one side of the ClampGAUGE and feed the free end of the band between the screw and bar/pipe. Pull the free end of the band and loop it over the opposite end of the ClampGAUGE, making sure that the bands do not interfere with the center pad or end pads.



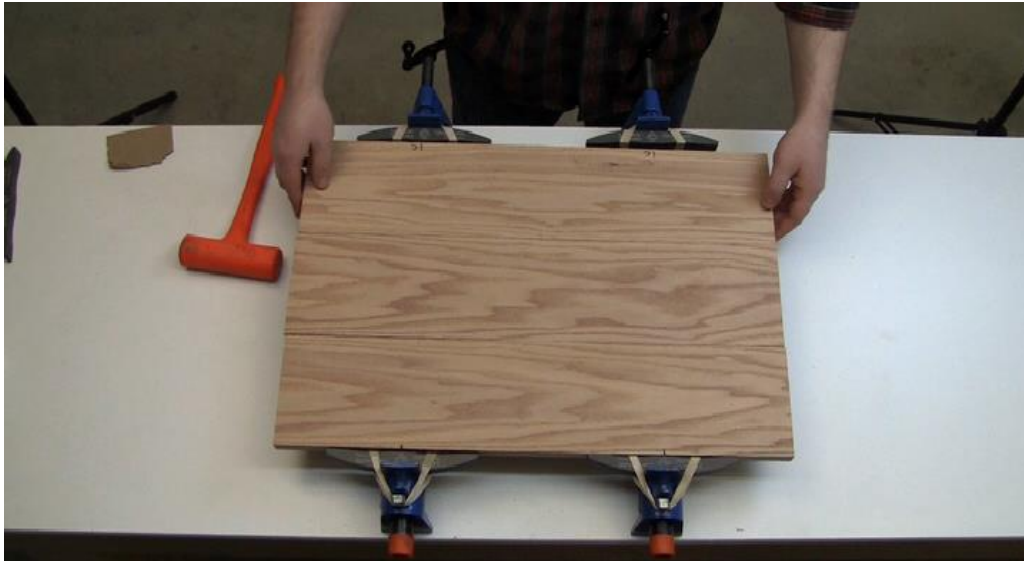
For the fixed end of the clamp, loop the band over one end of the ClampGAUGE, twist it to form a 'figure-eight' and then loop the free end over the other end of the ClampGAUGE. Now, pull the band away from the side of the ClampGAUGE and stretch it around the fixed clamp head.



Positioning Note: The ClampGAUGEs are $\frac{3}{4}$ " thick. If you are clamping $\frac{3}{4}$ " thick boards, the ClampGAUGEs will be flush with the top and bottom of the board. If you are gluing $\frac{7}{8}$ " or 1" thick boards, you will need to offset the ClampGAUGEs so that they are centered on the boards thickness.

Step 5

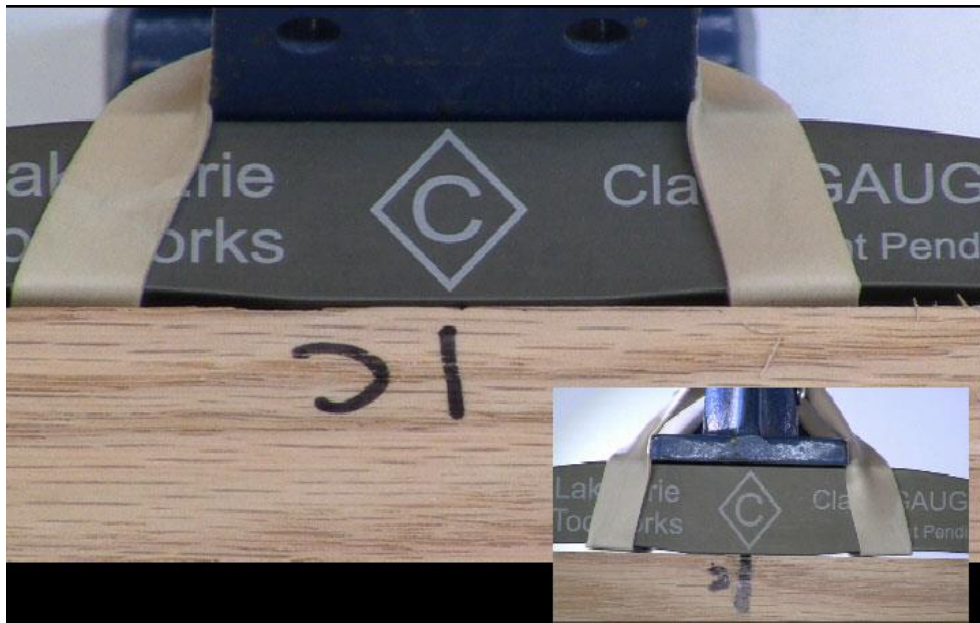
Set your clamps up and put your boards on them in the order that they will be glued up.



Step 6

Use the diamond shaped center marks on the ClampGAUGEs to center them with the clamp jaws and then move the boards and clamps so that they line up with the marks made in Step 3. Apply a small amount of force to the clamps and make sure everything is lined up properly. You'll notice that the fixed jaw will lift slightly as the clamp is tightened, pulling the ClampGAUGE and far end of the board up with it. You will want to tap that end of the board and ClampGAUGE down with a deadblow mallet so that the boards stay flat on the clamp bar/pipe.

Then tighten the clamps until each ClampGAUGE bottoms out. If you have trouble seeing the gap closing, a piece of paper or thin feeler gauge will tell you when it has closed. Also, you will feel a noticeable increase in resistance when tightening the clamps once the ClampGAUGEs have bottomed out.



Note: When using more than two clamps, it is recommended that you alternate putting the clamps on the top and bottom. For three clamps, put the outer two on the bottom and the middle one on top. For four clamps, put the two outer clamps on the bottom and two inner clamps on the top. For more than four clamps, alternate top and bottom.



Optional: Putting smaller clamps on the ends of the panel to keep each joint in alignment is helpful.



Optional: Using thick wood clamping cauls is also helpful to keep the panel flat during the glue-up process. Using wooden cauls allows you to position all of your clamps on the bottom, simplifying the glue-up. When using cauls, you should bolt or clamp them together before tightening up the bar/pipe clamps.

Note: Coat cauls in wax or clear tape so that glue squeeze-out doesn't bond them to the panel.



Step 7

Now that you've done a dry run and ensured that everything is properly placed, loosen the clamps and apply the glue to your joints. Then clamp them using the same process as outlined in Step 6.

Next, following your glue manufacturer's instructions, leaving the panel in the clamps for the recommended amount of time.

Note: If using clamping cauls, loosen the bar/pipe clamps prior to loosening the clamping cauls.

We truly hope that you enjoy your ClampGAUGE System from Lake Erie Toolworks and if you have any questions or comments regarding the instructions detailed in this document please feel free to contact us via email at info@LakeErieToolworks.com.

Best regards and happy woodworking,

Nick Dombrowski
Lake Erie Toolworks