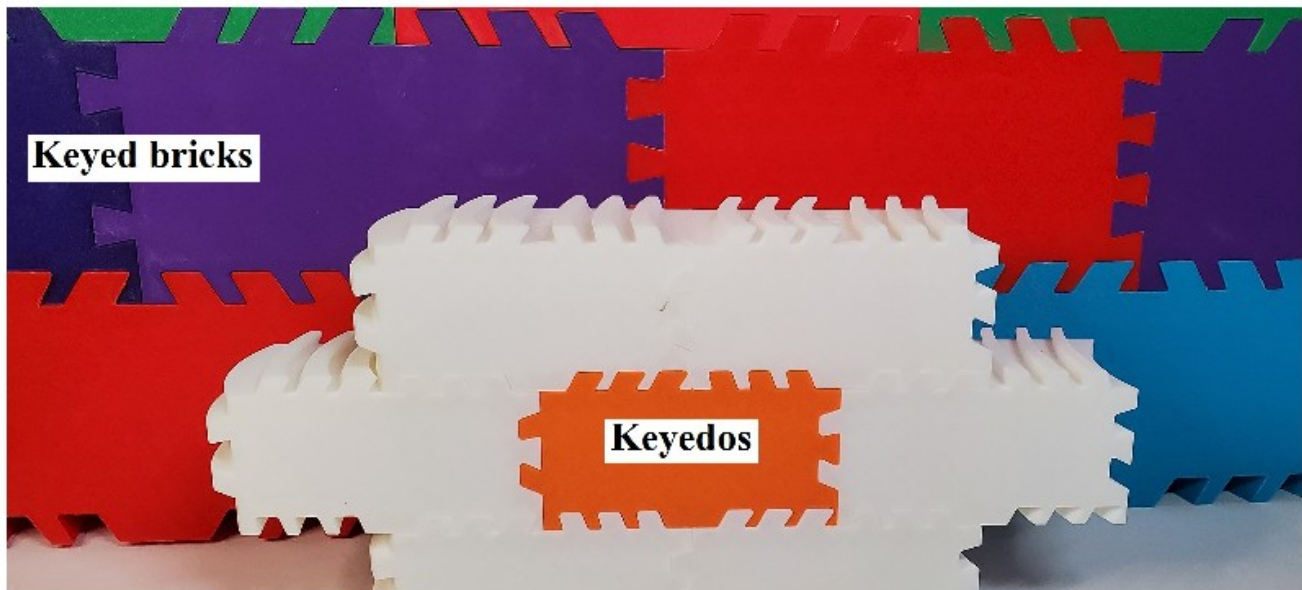
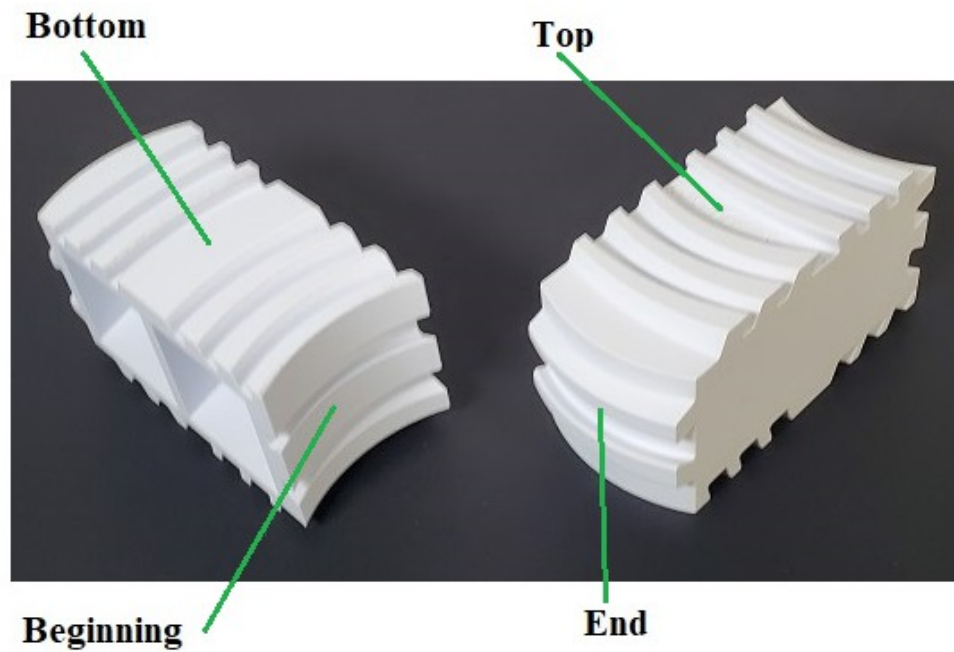


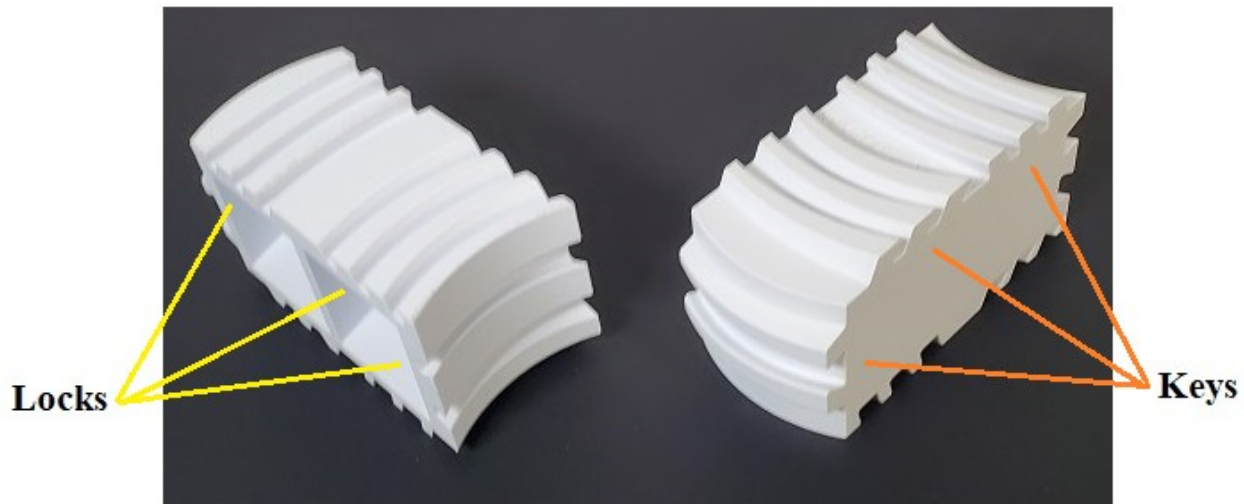
Keyedos Overview August 28, 2026



Keyedos are 1/8 scale of Keyed Bricks. They are 2x2x4" or 50x50x100mm



The Keyedos brick on the left is showing the bottom and beginning. The one of the right is the top and end.



On the left are the recessed “locks” on the bottom and beginning. They are embedded into Keyedos surface. They are shown in three groups that have the same axis of rotation.

On the right are the extended “keys” on the top and end. They extend above the top and ahead of the beginning. Each of the three groups has a separate axis of rotation.



The pictures above are how the Keyedos bricks assemble. The blue brick is engaging the beginning locks with the end keys of the red brick. The blue brick is also engaging with the top keys on a white brick. The motion is circular following the top curve of the blue brick with the top curve of the red brick. In the third frame the blue brick is joined by a third red brick with a different set of top keys. The last two show the full engagement of the blue brick.

It is important to note that blue brick rotates on its single axis allowing the keys to penetrate as it swings into its terminal position. Each of the separate keys has the matching axis of rotation on other bricks. Each of the keys has to an axis of rotation to match the blue brick. That means each set of keys has to have a different axis relative to the brick it is on.

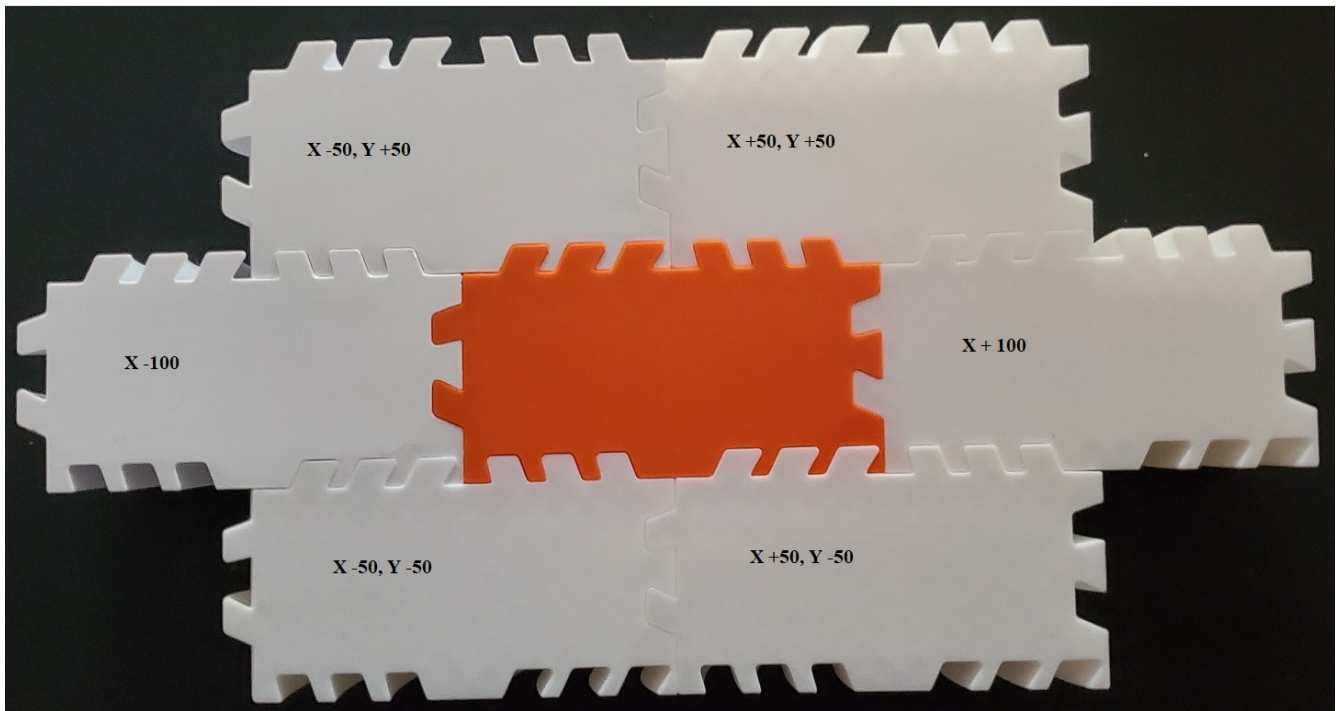


All Keyed Bricks have a top center label. The standard brick is Keyedos A5.07. A5 is the part code. The 0.07 is the tolerance. That means that the locks are 0.07mm larger to accommodate 3D printing issues. The Bricks will fit together snugly and can then be separated. A smaller tolerance would lock them together more.

The tolerance of 0.10mm were to loose and the 0.05mm were too tight.

What you are purchasing is the STL print file for a Keyedo brick. Included is a person use license that says you can print as many as you want for your use.

The same STL print files can be used for Finite Element Analysis (FEA). FEA is computer simulated destruction. It is used to show how mechanical stresses act on the connected components. Below is the configuration I would like to see used. The beginning orange block is 100x50x50 with 0.07mm of tolerance between them. The surrounding bricks are copies of the orange brick with the X and Z values added. The FEA test can be done with different materials and different axis of stress.

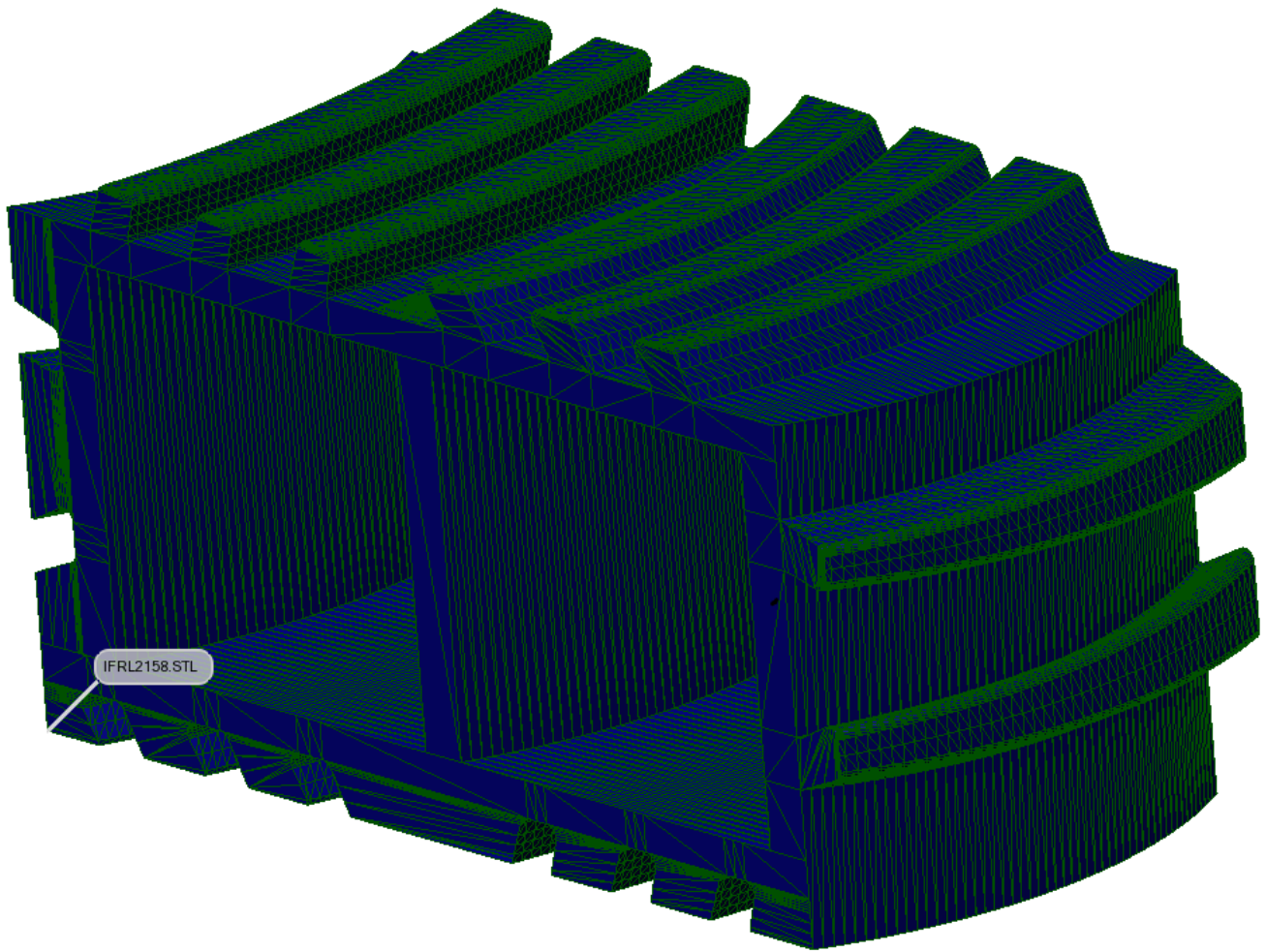


I would like to see multiple independent FEA studies published on the web. Keyed bricks have four separate independent locking systems/characteristics that are the reason why Keyed bricks can be assembled without mortar or other fasteners. The fastening is built into the body of the bricks. Keyed bricks assemble with a single 50-degree rotation that most adults can do.



Experience has taught me to 3D print 6 bricks at a time. I could do more, but if there is a printing error, then I loose 6 instead of more. I use a Prusa Core One plus FFF printer. It takes 2 hours per brick. A Formlabs SLS laser printer took 45 minutes.

I prefer to stack these in seven offset layers of 6 and 7 bricks totaling 63 bricks per stack. They fit on my shelve. These six stacks has 315 bricks. When building I use a stack at a time.



Each Keyedos brick has over 19,000 surface points that are designed to match the 3D printers resolution. These bricks are constructed. Not how the ends of the keys on the top and end start small and become larger. That is how they can pass through the locks until all of the key surfaces engage with the lock surfaces at the same instant. This is the primary locking system.

There is 23 flat top/bottoms and flat beginning/ends for doors, windows and walls. There are 30 clockwise and counter-clockwise corner bricks. The 3D print files for these are also for sale.