

Are Dowels Stronger Than Screws?

Ah, the age-old question of dowels versus screws. There are thousands of projects out there that require one of the two, but there can be a lot of debate when it comes to strength. No one wants to use a weak link, so which one of these woodworking devices takes the cake?

Dowels are stronger than screws because they have glue to reinforce their strength due to their penetration into the wood. Additionally, they will not strip sensitive materials and are set properly before moving to a project's next step, avoiding errors.

Even though a dowel is stronger, screws certainly have their place in the project world. Some projects cannot accommodate a dowel. Obviously, both have their own unique advantages, but they can require a closer look to understand when and where they would be used.

Before settling this debate, let's first examine the function of both dowels and screws. Then continue reading to figure out why dowels are stronger and what really matters when using either of these pieces in your woodworking craft.

What is the Difference in Using a Dowel vs. a Screw?

Before we can understand why a dowel's superior strength might not make it the right selection for your unique project compared to a screw, it is important to take a closer look at the function of these two devices.

Specifically, as a dowel is known to be stronger than a screw, it will not necessarily be the right fit for your woodworking project. While a dowel can join two pieces together and withstand significant pressure, screws are generally smaller and able to work in more tight-fitting locations.

Let's take a closer look.

How Does a Dowel Work?

Dowels are pretty incredible little binders when you come to think of it. They are little bitty pegs (essentially) made from wood that can join together the heaviest pieces of wood without moving an inch when pressure is applied.

They are sturdy, they are simplistic, and they can keep things together without you having to worry for even a second that they can't fulfill their joinery duties.

Dowels can be found in many different widths, and they can generally be cut down to the size you prefer to use. So, in case you were picturing a 2-foot long dowel to be used with your 6-inch project, keep in mind that this is not typically how this works.

Before screws were even thought of, dowels existed. They are now considered an old-school joinery method, but still, many woodworkers use them for a multitude of reasons that we will discuss later.

Dowels bind two pieces of wood together along with an adhesive through the pressure of clamps. Yep, that is right; the little wooden peg is what holds together some of the most masterful wood pieces here on Earth.

The dowel is inserted after a hole is drilled into two pieces of wood. Once the hole is drilled, the dowels are inserted into one piece, and then the other piece slides into the exposed side of the dowel.

Of course, you will have to ensure that the width of the hole that is drilled matches that of the dowel - otherwise, you can find that your dowel may slip more than you prefer, or you have to rely on heavier adhesive.

After this wood is inserted into the hole, the piece is left to sit and dry so that all the adhesive is completely dry before any moving occurs. This can obviously be a tedious process and time-consuming, but it is tried and true.

Then, the dowel should withstand a significant amount of pressure, but this will vary depending on the type of woodworking piece you used it for (and the size of the dowel itself).

How Does a Screw Work?

It is the opposite of the dowel; a screw is a tool used to get things done quickly and with as few steps as possible. Screws are much more complex in their design than a dowel.

This design was created for speedy entries and speedy retreats. No, screws cannot rob a convenience store, but they can be in and out of a dozen different surfaces within a matter of seconds if they were burglars, they would-be professionals, no doubt.

A screw's design has a straight piece of material with an inclined plane wrapped all the way around it. It has a flat head on it and a pointed tip, which helps dig into tough surfaces without getting too much resistance.

However, a screw does not work alone. It has to have either a machine powering it or a person's torque to get it deep into any surface. Once you have torque, though, they insert fast and hold tight.

This is why screws are so appealing - they are applied much more quickly than dowels and do not take a ton of effort. Even more, once you have a screw set where it needs to go, you can move on to the next one or finish your project and be on your way.

There is no wait time and no need to let anything cure over a few hours like you would have to with dowels. Screws are fast, efficient, and newer-age alternatives to the dowel that help save time and effort.

Why is a Dowel Stronger than Screws?

So you know now how a dowel works. It is not just a little peg that stands along, but a tiny woodworking masterpiece that uses glue and time to really get the job done right. First, let's talk about the glue. Dowels are typically used with glue when it comes to woodworking.

If you are buying something from IKEA, your dowels may not come with this, but you get what you pay for! Glue is a dowel's best friend and, thus, your project's biggest source of strength.

Using glue with a dowel is like using shaving cream when you shave. Of course, you can shave without it, but the shave will not be nearly as smooth, and you will likely have a nasty razor burn once it is all said and done with.

The glue used with a dowel helps to deeply penetrate the wood, which gives the dowel a huge amount of holding power. There are two levels to the joint in this situation, and they help give better stability than a screw does.

Second, when using dowels, craftsmen typically use a clamp and dry method that allows the project to sit and set for a few minutes, hours, or days before they go back in and start with the next section of their project.

Because of this, woodworkers can make 100% sure that the joint is perfectly set before they move forward. This helps to ensure that each step is meticulously done and mistakes are then avoided.

Third, dowels are a fantastic option for materials like plywood. These materials are not known for their strength but are often used in projects requiring extra support or thin material that is very versatile.

Due to the composition of such materials, they are easily stripped and break without warning. Dowels work fantastically in them because they will not strip out in the material, and therefore, your projects are saved!

Dowels kind of a poetic type of tool when it comes to woodworking. The craftsman has to take his time with them and be intentional about every hole he drills.

They are strong, but they are also a sign that someone has put in some serious work to ensure the best product for their customers or even for themselves. Compared to screws, dowels are considered to be much more of a luxury due to the time and craftsmanship they take for use.

How Does Application Affect the Use of a Dowel?

When it comes to strength, what really matters? Application, application, application. Although dowels are stronger than screws, sometimes they cannot work for the project you have at hand or do not have enough time to invest in such a time-consuming effort. If that is the case for you, all you need to worry about is application.

The application affects the use of a dowel in that it needs to both be applied to the project you select and the application of the dowel itself needs to be secure. Even if you are using dowels, you may as well forget it if you misapply them. Application is the key to the success of either of these, and it is made or break.

When using a dowel, you need to make sure that each hole lines up just right and you do not work to jam the dowel into the entry points. This can break or damage the dowel, which will result in a compromised structure. For screws, ensure that you are not stripping the material when you insert it and use the proper amount of force to avoid any splitting. If you apply them the wrong way, it can mean a total restart for you.