Zzzzzzzzip it! We love the sound, the look, and the functionality of zippers. But most of us are not so in love with installing them in our sewing projects. In fact, there's probably no sewing technique more dreaded than learning how to properly install a zipper. If you're a regular S4H visitor, you know that's a challenge we can't walk away from. Today, you are going to learn how to master the most conventional zipper technique. Once you've done so, one warning: anyone who finds out about your new skill will be dropping off all kinds of items with broken zippers on your front porch. Ha! Pull them inside, and teach them how to do it themselves! The steps shown below are for a "conventional" zipper as you might use on a garment – where the fabric meets along the center of the zipper teeth, concealing them.

Interestingly, Elias Howe, the same man credited with inventing the sewing machine, received a patent in 1851 for the first zipper, which he called: "Automatic, Continuous Clothing Closure." It's speculated that due to the popularity of his first invention, he never produced this very early version of the zipper.

The zipper's next debut was at the Chicago World's Fair in 1893. This version, called the "Clasp Locker," was designed by Whitcomb Judson as a shoe closure.

In 1913, a Swedish-American engineer named Gideon Sundbäck designed the more recognizable zipper while working for the Universal Fastener Company. Its sole purpose at the time was for military use on boots, life vests, and flying suits during WWI. Sundbäck received a patent in 1917 for a version with additional teeth and a slider, which he called the "Separable Fastener."
In 1923, Benjamin Goodrich took Sundbäck's design into the modern age by installing zippers into everyday rubber boots and tobacco pouches. It was the sound the zipper made when opening and closing that gave Goodrich the idea for the official name we know and love today: the Zipper.

If you think these gentlemen are the main cause for zipper anxiety, think again! In 1930, it was the fashion industry that began to use zippers on children’s clothing and in men's trousers. The zipper made it easier for children to dress themselves, and men would no longer be embarrassed by wrongly-buttoned fly closures. The zipper quickly became all the rage and we've never looked back.

With such a long and interesting history, it's not surprising to find zippers everywhere today, from your favorite jeans to NASA space suits, as functional closures or pretty embellishments. They’re available in a variety of types, lengths, sizes (meaning the size of the teeth), colors, and finishes.

Zippers can be made of metal, plastic or nylon, and are fitted on a woven or knitted tape made of cotton, cotton blend or polyester. The teeth on zippers are constructed in one of three ways, either chain, molded or coil.
Based on the above parameters, zippers are grouped into a specific list of types. In addition, the type of zipper you choose should be specific to your selected project and fabric. For example, a heavy metal zipper is not traditionally the choice for delicate cotton voile.

Types of zippers

Conventional

This is the most common type of zipper, and the one we will be using in the installation steps below. It’s probably the one you’ll end up using the most as well, since it’s applicable to so many kinds of sewing projects. It has a pull at the top and a stop at the bottom and comes in a wide array of colors. Lengths are generally between 4” to 22”. Specialty shorter and longer versions are often available too, but in fewer color options.

Separating

These are the zippers we find in jackets, hoodies, etc., which open at both ends. They’re available in a variety of lengths, usually from 12” to 48” and can be found in both plastic and metal versions.
Two-way

Most likely you’ve owned a garment (probably a snow jacket) with one of these crazy zippers. They have two pulls at the top and bottom so you can open them in either direction at the same time. They are also the type most likely to come in the longest lengths, ranging from 26” to 48”.

There’s also a two-way version of this zipper, which allows you to zip it closed from either end with the pulls meeting in the middle. This is the type used on larger bags, luggage and in upholstery cushions. We used this type of zipper on our Designer Barrel Tote.
Reversible

This is designed to be applied to a reversible garment and is also separating. In order for the zipper to work properly on either side, there is a dual zipper pull at the top.

Blue jean

Chances are you’re familiar with this one! It’s made of metal in a brass finish and available in shorter 6" to 9" lengths.
Decorative and Specialty

Zippers can be used for everyday functionality, for a special purpose, or simply as embellishment. There’s a huge range of decorative and specialty versions available.

Invisible

This zipper is so mysterious... you can't even see it! That's where it gets its name. Actually, the coils are attached under the tape, making the teeth seem invisible, but rest assured... they are there. Like its conventional counterpart, this type of zipper is available in a wide range of colors and lengths, usually from 9" up to 22".

NOTE: We have a separate tutorial on how to insert an invisible zipper.
On a roll or by the yard

In the home decorating section of your fabric store, you can find very large/long zippers made of metal and plastic. These are designed to be used in very large/long projects, such as seat cushions. Some come on a roll with multiple zipper pulls attached. You slide the pulls down the length of zipper, except for the one you need, then cut the length of zipper required for your selected project. Save the extra zipper tape and pulls for future projects.

If you purchase zipper by the yard, you have to add the zipper slider/pull yourself on one end. The other end is usually sewn into a seam. This type of zipper is usually only available in basic colors, like black and white and sometimes a few primary colors. We used zipper by the yard in our Sleep Sack project as well as our Pyramid Bean Bag Chair.
The ones described above are the most common zipper types, but if you start looking closely, the zipper universe gets quite large. You can find special zippers for: sleeping bags, marine use, gaiters, robes, slipcovers, coveralls, purses, pockets, lightweight applications, heavy jackets, extra long openings, parkas, etc. Even using just the zipper tape itself has become a popular form of metal trim embellishment. We used it in our Bucket Style Purse With Zipper Tape Trim project.

It's clear to see the zipper has come a long way since its days in WWI military boots! The most important thing to remember is to use the correct zipper for your application.

**Anatomy of a (basic) zipper**

Just when you thought we were done explaining all about the zipper, here's a quick overview of the anatomy. Why? Because if you understand what you're working with, chances are you'll have a more successful experience sewing it into your next project.

![Diagram of zipper anatomy](image)

**Top stops**: The little metal thingies at the top of the zipper that keep the pull from coming off the teeth.

**Slider body**: The mechanism that brings the teeth together going one way, and pulls them apart going the other.

**Pull**: The tab attached to the slider body so you can zip and unzip.

**Teeth**: Pretty obvious, but don’t forget they can be coil or chain constructed.

**Tape**: The fabric the teeth are attached to and the part onto which you actually sew.
**Guideline:** Depending on the type of zipper you’ve purchased, the tape may have a subtle indentation along either side of the teeth. This where you sew when doing a basic installation.

**Bottom stop:** Holds the zipper together at the bottom and keeps the pull from coming off the bottom.

**Top and bottom tape extensions:** The portions of the tape that extend beyond the top and bottom stops. These extensions give you space beyond the zipper to help secure it in place within your project.

## Supplies required

### Zipper feet

Depending on your make and model of sewing machine, you should have a zipper foot in the standard accessories that came with the machine. If not, you will need to purchase one. Trying to install a zipper without the correct presser foot is probably what scares most people away from the task. Use the right foot for the job. While at your sewing machine retailer, ask about other types of zipper feet available. Below are the zipper feet we use on our studio machines, which are provided by Janome, our exclusive sewing machine sponsor.

- **Zipper foot E:** This foot should come standard with your machine. To sew along either side of a zipper, you snap the foot on and off, switching sides of the foot as you sew (shown left above). It also comes in a 9mm version (shown center above) for those machines that can accomodate this width. This 9mm version of the foot is slightly elongated, and the left/right switch is accomodated by moving the needle postion on the machine.
- **Concealed zipper foot:** This foot is specifically designed for use with an invisible zipper only (shown right above). As mentioned above, we have a separate invisible zipper tutorial.

### Other supplies

- The sewing machine needle and thread appropriate to your fabric type.
- A seam ripper.
- Interfacing; we prefer a fusible, but you can use a sew-in type too. It’s traditionally recommended the area where the zipper will be installed be interfaced for extra strength and durability. You don’t HAVE to interface every time, and we admit to not necessarily doing it in all of our projects. However, in our technique tutorials, we always like to give you all the steps for the very best outcome.

## Installing a zipper

Before you rush over to your sewing machine to install a zipper, you have to review the type of installation you are going to do for your selected project. If you’re following a pattern, it’s easy to determine. If you’re designing your own project, you want to
think about how you want the zipper to look and function when sewn in place. For example, if you're sewing a zipper into the seam of a pillow, you will use a process similar to the one described below. But, if you're planning to sew a zipper into a pair of pants, that process is slightly different.

We are not covering step-by-step instructions for all the specialty installation techniques. Our goal is to show you the standard steps to install a conventional zipper. Once you master that, you can branch out to other options. We cover some of these specialty techniques in various project tutorials as well. Before attempting any of the zipper techniques listed below, be sure to fully research how each process is completed. If you are a S4H fan, you know we strive to always include full step-by-step instructions and/or links to other tutorials for the specialty techniques within our projects. You can also look for help in basic sewing books or videos. Some are sewn from the right side, with the zipper underneath, some from the wrong side where you can see the tape of the zipper... each is unique.

**Centered**

The zipper is centered along a seam and equal distance from either side. This is the installation we describe in detail below.

**Lapped**

You see this most often on garments, especially along a front, back or side seam. The zipper is sewn close to the edge of one side of the seam, farther way on the other side of the seam, creating a lap of fabric over the zipper.

**Inserted (or side placket)**

This installation is similar to a centered zipper. The difference is the top and bottom of the zipper are sewn across, so your stitching forms a rectangle. You may have seen this on special occasion garments within a fitted side seam. The zipper's opening allows just enough room to get the dress on. For home décor, you might use this technique on a pillow back.

**Separating**

Installing a separating zipper takes some specific tricks. Ever have the zipper pull get caught on the fabric or lining of your jacket? The teeth of a separating zipper need to be fully exposed so it can function properly.

**Fly front**

It's pretty obvious that the zipper sewn into the fly front opening of a pair of jeans is a unique process. It's sewn underneath, leaving only the curved topstitching on the outside visible.

**Exposed**

A common zipper in sportswear, as well as in many of our home décor projects, in which all the teeth and part of the tape to either side of the teeth are exposed. In the main image at the top of this article, you can see several examples of this very common technique.

**Concealed**

Contrary to the exposed zipper, these are hidden in the seam, which is why you can only achieve this look with an invisible zipper.

*It's the moment you've been waiting for! Let's install a zipper.*

**Basic center installation of a conventional zipper**

NOTE: *As we do in majority of our technique tutorials, we are using a plain fabric and contrasting thread so you can focus on the installation technique. With zippers, you can use matching or contrasting thread; it all depends on the type of finish you want.*
1. Depending on the length of your zipper, there may be creases or folds from being in the package, which can effect the installation. So, your very first step is to press the zipper tape along either side of the teeth. You want a nice, smooth zipper. Be careful of the heat setting on your iron; you don’t want to melt your zipper if it's made of plastic. This is also the ideal time to test that the zipper works perfectly. Zip and unzip it a few times.

2. On the wrong side of the fabric, interface the area where the zipper will be installed. The strip of interfacing should be slightly longer than your zipper, and the same or slightly wider than your seam allowance.

3. Depending on the type of project, you may want to finish the raw edge of the opening with a zig zag stitch on your sewing machine.

4. Using the seam allowance appropriate for your project, machine baste the seam closed (the seam into which the zipper is to be placed). The seam allowance will depend on your project. The standard home décor seam allowance is ½”, so that’s what we’ve used in our example. Press the seam allowance open.

5. On the right side, with a fabric marking pen, pencil, or chalk, draw a line ¼” from the seam on either side. This is going to be your stitching line.

   NOTE: As you become more comfortable with sewing zippers, you can probably eliminate this step, but if you are just beginning, it is a very helpful guide.
6. Flip over the project so it is wrong side up again in order to accurately center the zipper teeth on the seam. This is a VERY important step for success!

NOTE: As an extra help for beginners, it’s okay to use pins to hold your zipper in place before securing it with one of the suggested methods below. Also, make sure the pull (the little tab) is pointing up so you can easily grab it to lower the zipper later.

7. To maintain this nicely centered position, you must secure the zipper in place. You can use simple straight pins, but experts will tell you these become cumbersome and are in the way when sewing. Because this technique requires you to sew with the zipper under the fabric, it's also very hard to see the pins.

8. Here are the alternatives: You can hand baste the zipper in place with needle and thread. We prefer to do this. Why? Because it gives us the most control over the placement of our zipper.
9. You can machine baste the zipper in place along the seam allowance only. This means you have to fold everything to one side so just the zipper and seam allowance are under the foot.

10. You can place sewing tape or scotch tape across the zipper, making sure not to tape across the bottom stop where you’ll need to sew.
11. With your zipper secured (using your favorite option from those listed above), mark where the bottom stop is by placing a pin (or drawing a line) just beneath it on the right side of the fabric.

12. Set up your sewing machine for a straight stitch. Lengthen the stitch slightly to accommodate the thickness of the layers of fabric, interfacing and zipper tape. We set our length at 2.5 mm.

13. Attach a Zipper foot. As we mentioned above, we attach ours based on the side of the zipper we are going to sew.

14. When sewing a zipper, you always sew both sides in the same direction. For a centered zipper installation, it’s recommended to sew from the bottom up.

15. Starting at the bottom of the zipper, beneath the bottom stop (where you placed a pin or drew a line), begin your stitch at one corner where the side and bottom intersect at a 90˚corner. To lock your seam, you can backstitch or leave a thread tail to be pulled through to the back and knotted. If your sewing machine has a lockstitch function (like our Janome) you can also use that.
16. Sew across the bottom of the zipper. Stop, with the needle down, at the opposite bottom corner. Pivot and begin to sew toward the top of the zipper following your marked line.

17. When you reach the pull, stop again - again with the needle down.

18. Raise the presser foot. Reach under and gently slide the pull down past the foot. Trying to sew around the foot will result in a wavy stitching line.

NOTE: If your machine has a knee lift, now is a great time to use it! You can also see why we recommended keeping the zipper pull in the up position earlier in the steps. It is now much easier to grasp and slide down and around the foot.
19. Lower the foot back into position and continue to sew until you reach the raw edge. Backstitch to lock your seam. Remove the project from the machine. Pull the slide back up into position (in other words, zip the zipper all the way closed and make sure the pull is pointing up again).

20. Replace and reposition the project so you can sew the opposite side.

21. Starting back at the bottom, stitch in the same manner as above but along the opposite side. Be sure to start your stitching in the far corner, going over your previous bottom line of stitching. This double stitching will help reinforce the zipper at the bottom. Also, remember you will have to slide the pull out of the way again! NOTE: Depending on the type of zipper foot, you may need to snap it off and back on in order to switch sides. That’s what we did.

22. On the right side, use a seam ripper to remove the original basting stitches and expose the zipper.
**You did it!**

NOTE: Installing a zipper using the Inserted method, which you might use on the back or side of a pillow, is basically the same as the steps shown above. The only differences are that you would center the zipper within the seam (rather than placing it flush with one edge), and you would sew across BOTH ends of the zipper. Your finished stitching will look like an elongated rectangle. We used an inserted zipper within the pocket of the lining in our Designer Barrel Tote.

You may be wondering about the raw edge at the top of our zipper sample. Depending on the type of project, this area is finished in different ways. The majority of the time, you will sew across the top of the zipper just above the top stops. Then, you will trim away the excess at the top. You can also fold the excess back onto the zipper and tack it in place. It’s really a personal choice. If you’re following a pattern, this will be addressed as well as exactly where to place the zipper along the seam.

**Hints & Tips**

1. Your zipper should normally coordinate with your project fabric, but contrasting zippers are fun too.
2. Always test to make sure the zipper actually works before you sew it into your final project. It's not unheard of to get a “lemon” of a zipper, and it's just tragic to find that out after you've put it in.
3. You should purchase the appropriate length zipper for your project, but, if it’s unavailable or if you have one on hand that is longer than needed but the perfect color, you can shorten a zipper by sewing a “thread stop” by hand or machine. Then, simply cut off the excess – just don’t use your good sewing scissors to cut with!
4. If a separating zipper needs shortening this should be done from the right side. Using the same method as above, create a thread stop on either side of the zipper.
5. Depending on what the zipper is made of, it may require pre-shrinking (just like your fabric). Check the content information listed on the packaging.
6. To care for your sewn project, always close any zippers before laundering or dry cleaning.
7. Once installed, any pressing along the zipper should be done with a pressing cloth to avoid impressions, shine or puckers.
8. Depending on fabric type, you can add stay stitching along the zipper opening within the seam allowance. This is the same stitching you use along curves, such as necklines and princess seams.
9. If you’ve miscalculated and need additional fabric along the edge of the fabric in order to install the zipper, you can add seam binding along the raw edges.
10. If you are really fancy, you can fussy cut the seam area so your zipper seam is a perfect match when closed.
11. You can insert a zipper by hand, but that’s usually reserved for very specific fabrics and/or as a fine finish in couture garment sewing.
12. In garment projects especially, it’s important to finish the raw edges of the seam prior to installing the zipper.
13. Know your zipper foot! Some slide left to right, some require you to move the needle, or like the one we used, some are snapped on and off to switch sides of the foot. Visit your sewing machine retailer for assistance if needed.
14. At the fabric store (or on the Internet), you’ll find other zipper-related items available, such as stops, waxes, lubricants, even special zipper pliers.

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Sample Creation and Instructional Outline: Jodi Kelly

Sewing Tips & Tricks

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