

Selecting a Serger

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The serger has increased the quality and creativity of fashion and home furnishing items sewn at home. Since they were first introduced to the home sewing market, serger applications have gone from the simple serged seam and edge finish to elaborate decorative stitching. Understanding the features of today's multifaceted machines can be somewhat intimidating. This publication discusses what to consider when purchasing your first serger or upgrading to a new machine.

A serger not only helps you sew faster, it helps you sew better. A conventional sewing machine sews approximately 600 stitches per minute, whereas a serger sews up to 1700 stitches per minute. It will stitch a seam, trim, and overcast in one operation, producing finished seams like those found in ready-to-wear clothing, accessories, and home décor items.

Sergers simplify the once difficult and time-consuming steps. Some steps that could be done on the sewing machine only by skilled seamstresses now with the serger can be completed in seconds, even by a beginner. You can use a serger for many sewing projects. A serger is indispensable when you want to:

- Sew aerobic wear, swimwear, and lingerie that maintain their stretch and look factory produced
- Finish sweater knits without ribbing
- Make narrow or rolled hems in seconds
- Finish many items without facings
- Sew seams that are pucker free

- Sew sheers that are truly sheer
- Make decorative seams such as flatlock stitch or mock French hand sewing
- Make your own trims
- Apply decorative yarn or threads
- Recycle or create striking garments by easily splicing fabrics

Sewing with a serger will help you create these projects as well as professional looking garments and edge finishes quickly and easily. Use your imagination! Projects are limitless.

Sergers or overlock machines, unlike conventional sewing machines, form interlocking looped stitches using one or two needles and one, two, or three loopers. The overlock stitch resembles crochet or knitting stitches more than the stitch of a conventional sewing machine.

A serger does not, however, replace a sewing machine. You still need a sewing machine to put in zippers, make buttonholes, topstitch, and sew standard, pressed open seams.

Most top-of-the-line sergers also include the coverstitch. This stitch is used for hemming and decorative topstitching. When only one needle is used, the machine is capable of creating a single needle chainstitch.

Shopping for a Serger

Take your time when shopping for a serger. Most major sewing machine companies manufacture sergers, so you will have many brands and models from which to choose. Sergers, like sewing machines, are available in basic mechanical as well as electronic and computerized models.

Whether you are purchasing your first serger or upgrading, you should determine your needs

first. If you are looking for a utilitarian machine to compliment basic sewing and mending, then a no-frills model is all you need. If you want a machine to express your creativity, then choose a full-featured model. For professional dressmaking, consider specialized machines that will withstand daily use. Because sergers run at a high rate of speed, the quality of the machine is very important. Don't be fooled; "basic" doesn't always mean the lowest price.

A good dealer is extremely important. When you first begin using your serger, you will have questions, so purchase your machine locally if at all possible. Make sure your dealer is knowledgeable about the machine. You also should ask your dealer if he has had any training on servicing the machine. Find out if any introductory or follow-up lessons are provided by the store, either free or for a charge.

Check warranties on the machine. What does the warranty cover? What is the length of the warranty? Who honors the warranty—the manufacturer or the dealer? Some dealers will allow you to take a machine home for a few days to try it out. This is an excellent way to find out about different machines. The more familiar you are with the different functions of a serger and the different makes and models, the easier it will be to choose one that best meets your needs.

Types of Sergers

Sergers typically have three, four, or five threads. Top-of-the-line machines may have up to ten threads. The number of threads determines the types of stitches the machine can perform (see Table one on page 6).

The 3-thread serger is a very versatile basic machine. You can seam, finish edges, and sew blind hems and rolled edges with it. These machines function best on stretch fabrics. You also can sew woven fabrics with a 3-thread machine, but on loosely woven fabrics or in areas of stress you might want to reinforce the seams with your conventional sewing machine. Some 3-thread models can convert to 2-thread stitching in which only

one looper is used. The 2-thread stitch is basically used to finish seam allowances and fabric edges. The threads do not connect or "lock" at the seam line, so it cannot be used to sew regular seams. The serger can also be used to sew blind hems and the decorative flatlock stitch.

The 3/4-thread serger is the most versatile of the basic machines. It can be used either as a 3-thread or as a 4-thread machine. When all four threads are used, it makes a 3-thread overlock stitch plus an extra stitch for added durability. The 2/3/4-thread machines can convert to sew the 2-thread overedge stitch.

A true 4-thread machine makes a 2-thread chainstitch and a 2-thread overedge stitch. All four of its threads are needed to sew a serged seam. On some models, you can drop the left needle for a 2-thread overedge stitch or drop the right needle for a straight chainstitch. This machine is good for loosely woven fabrics, but it is not as versatile as the 3-thread or 3/4-thread machines.

Sergers with 5-thread capacity are capable of chainstitching and, depending on the model, may do a complete 3-thread overlock stitch and/or the coverstitch. Machines with six to ten threads can create a multi-needle coverstitch, decorative thread couching, and more.

Compare Basic Features of Sergers

Threading

Threading is usually the greatest concern to most consumers. Some machines are easier to thread than others. Look for a coded threading system. Colors, symbols, or numbers may be used to code the threading system. Some machines will have diagrams printed on them. Others have parts that swing away for easier threading. Most machines come with long tweezers and a needle-threader. You'll need them! One brand has "jet-air" threading that makes threading easy. A word of caution though: If dust or lint becomes trapped in the air channels, threading these machines is impossible. Replacement loopers can also be quite pricey.

Tension Control

Each thread is controlled by the tension. Tension systems differ from machine to machine. Some machines require the threads to be placed between the tension disks; others require the threads to wrap around the tension disks. Some tension controls are marked with numbers to indicate degree of tension, but some have only + and – signs. Some controls are very sensitive and require only slight adjustments. Others require more adjustment before the tension is affected. Machines with auto tensions are great as long as they can be worked manually as well. Tension will often need adjustment, depending on type and weight of fabric and thread as well as the type of stitch desired.

Needles

Some sergers use regular conventional sewing machine needles (the ones with the flat back side). Others require industrial needles. Determine what type of needle is required and be certain that they are readily available. Conventional needles are easier to find but more expensive. They are also easier to insert in the machine. Industrial needles are cheaper and stronger. You also will need to select the correct needle size for the fabric type being sewn, whether you use conventional or industrial needles.

Stitch Length Regulator

The procedure for adjusting stitch length also varies from machine to machine. Some machines will have a stitch length adjustment dial on the outside of the machine. Others require adjustments inside the machine such as loosening a screw or pushing a button then turning a dial or moving a lever. Determine how easily this adjustment can be made for regular seams and rolled edges. The latest models often have LCD or touch screens to make adjustments easy.

Stitch Width Regulator

Changes in stitch width or “bite” are accomplished in various ways. The latest models have dials, levers, or touch screen options for adjusting.

The throat plate or presser foot has a special stitch former or finger that is not found on a conventional machine. On some machines this finger can be adjusted to change the stitch width by either turning a dial or loosening a screw. On other machines, the throat plate or presser foot must be changed when a different stitch width is desired. Some machines require the lower knife be moved to change the seam width.

On 3/4-thread machines, the stitch width also can be adjusted by needle placement. Remove the left needle for a narrower 3-thread seam. Remove the right needle for a wider 3-thread seam. Tightening the tension also can narrow the stitch width by rolling the edge up or under. Standard widths for stitches range from 1 mm for narrow and rolled hems to 9 mm for wider applications.

Rolled Edge Adjustment

Most but not all sergers are capable of creating this handy edge finish. Conversion may require changing the throat plate or simply adjusting the tensions and selecting a narrow stitch width.

Differential Feed

Differential feed is essential when working with stretchy fabrics as it enables you to control puckering and stretching. Two sets of feed dogs, one in front and one in back, move independently at different speeds as the fabric moves under the presser foot. The differential feed feature may also be used to create gathers and wavy edges. Adjustment is controlled with a dial located inside the machine front cover or by a lever on the outside.

Presser Foot

The presser foot on a serger is much longer than one on a conventional machine so that the fabric can be fed evenly and pucker-free during the rapid sewing process. Check the position of the presser foot lifter to make sure it is convenient for you. Although most are located on the left or back, some manufacturers have moved the lifter to the right side of the machine near the flywheel.

Pressure Regulator

Most sergers have a screw on the top of the machine to adjust the pressure of the presser foot. Turn the screw right to tighten, left to loosen. Increase pressure, particularly when serging heavy fabrics, to help prevent skipped stitches.

Flywheel

Check the direction of the flywheel rotation. Some machines are marked. If the flywheel moves in a different direction than your conventional machine, it may be confusing. Consider marking the flywheel if the rotation is different.

Knife Blades

Most sergers will have upper and lower knife blades. Depending on the machine, one usually is made of hard carbide steel and the other of softer steel. The lower blade is stationary; the upper blade moves. The stationary blade usually is the one you have to replace most often and is the less expensive of the two blades. Even though the knives are made to last for many hours of sewing, it is important to determine how easy they are to change. Some models have knives that can be disengaged when trimming is not desired. Others rotate up and out of the way. Check to see how easy it is to prevent the blades from trimming. There are times when you will not want to trim. Does the knife lock in place? This can prevent the knife from being pushed out of position when sewing on several thicknesses of fabric, causing an uneven, unattractive seam.

Speed Control

Sergers sew considerably faster than conventional sewing machines. Look for electronic and dual speed controls on today's sergers. The slower speed will allow better accuracy for a beginner using the serger.

Built-in Light

You need good light to sew. If the machine has a light, what area does it light and is it adequate? The light needs to be in front so you can see where you are going to serge. You also will need to be able to see inside the machine well enough to change needles or thread the machine. A supplementary light might be needed. Also, check the ease of replacing burned out bulbs. Is a special bulb required?

Free Arm

How often you use the free arm on your sewing machine will indicate the importance of having this feature on a serger.

Optional Features to Consider

Specialty Presser Feet

Just like conventional sewing machines, sergers have special presser feet to aide in performing certain tasks. Additional feet are available for applying elastic, cording, and beading/sequins. A blind hemming foot may also be available; however it is possible to do a good blind hem on some fabrics without a special foot. A gathering attachment adds the ability to gather fabric, attach to another piece of fabric, and serge the layers together in one quick step.

Built-in Thread Cutter

Not all machines have this feature. If one is not built in, one can be purchased and attached to the side of the machine.

Waste Catcher

The serger creates waste as it trims away the fabric edge. Some models have an attachment to collect trimmings. Another alternative is to make or purchase one. Foam mats are sold with catchers attached. The foam mat also absorbs vibrations from the serger, keeping it in place as you serge.

Coverstitch

In recent years, the coverstitch has made its way into the serger arena. Several top-of-the-line serger models are capable of converting to coverstitching. Coverstitch machines are also sold as separate stand-alone machines. The coverstitch does not utilize the cutting blades on the serger. It is created using two or three needles, one for each row of topstitching, and one of the serger loopers to create a decorative stitch used for hemming. Some models have an additional thread that covers the topstitching, adding yet another decorative dimension. Identify the steps necessary to convert from serging to coverstitching and back again to serging. How easy is it to convert? Does the coverstitch require a different presser foot? Also, look for accessories to aide in applying elastic and bindings (Table 2).

Making the Big Decision

Before you decide which serger is right for your needs, take your time and do your research. Try several models and brands. For each model:

- Thread several times
- Note the direction of the flywheel
- Raise and lower the presser foot
- Change the throat plate and needle
- Adjust the stitch width and length
- Sew at different speeds. See how easy the machine is to control and if it “walks.”
- Check the blades. Find out if they disengage and, if so, how.
- Check the rolled hem feature
- Sew on a variety of fabric weights and types when testing the machine
- Check the warranty and dealer service
- Consider the machine’s price in light of all the above factors

Make a decision that will provide the best performance and true satisfaction at a reasonable price. Sometimes it is smarter to pay a little more, especially when good service and better quality are involved.

Reference

Dedic, Bette Jo (1987). *Selecting a Serger Sewing Machine* (H.E. 2-802). University of Kentucky Cooperative Extension Service.

Table 1. Serger stitches at a glance.

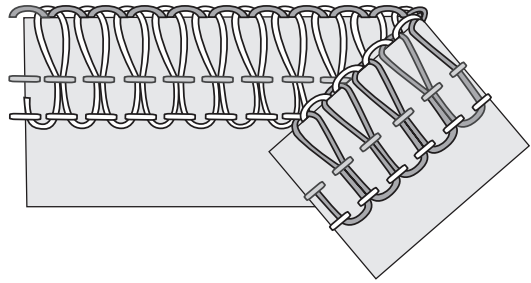
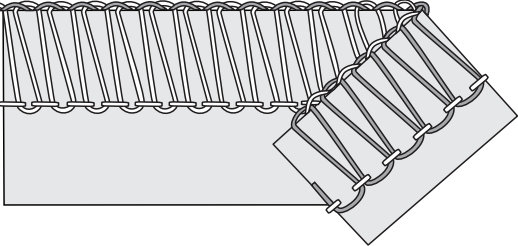
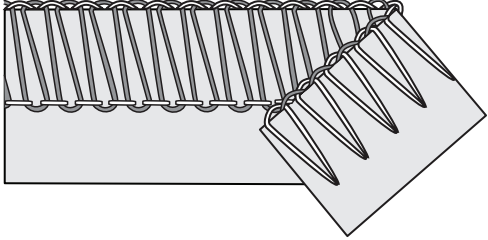
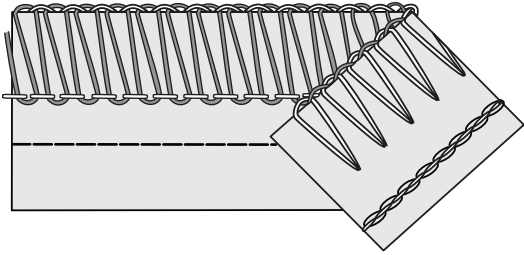
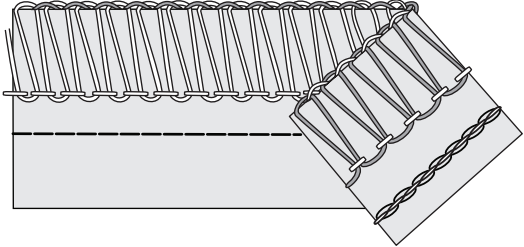
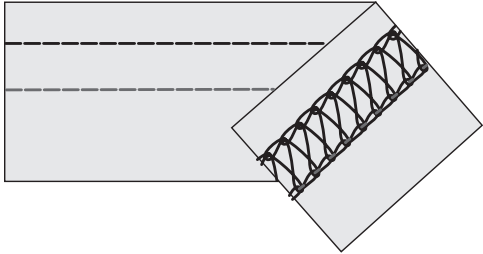
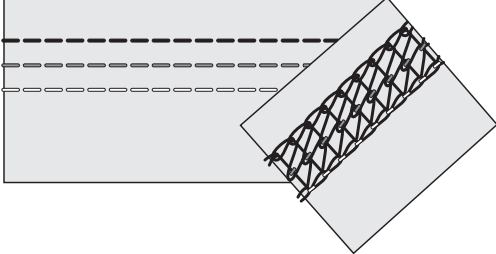
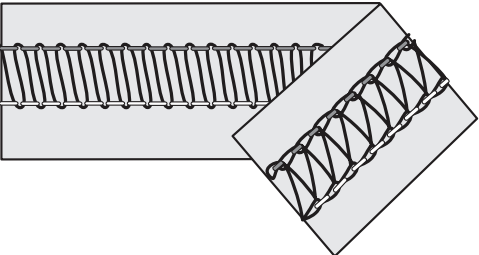
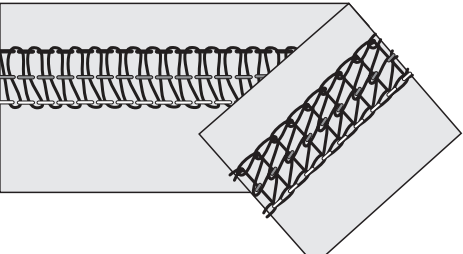
Stitch	Use	Illustration
		Topside/Underside
4-thread overedge	For stitching seams and simultaneously finishing edges on all types of fabrics, especially stretch fabrics	
3-thread overedge	For finishing fabric edges that fray easily, seaming lightweight knit fabrics, and applying the decorative flat lockstitch	
2-thread overedge	For finishing fabric edges that fray easily and applying the decorative flat lockstitch	
4-thread safety stitch (chainstitch with 2-thread overedge)	For stitching and simultaneously finishing edges on all types of fabrics, especially heavyweight fabrics	
5-thread safety stitch	For stitching and simultaneously finishing edges on all types of fabrics, especially heavyweight fabrics	

Table 2. Coverstitches at a glance.

Stitch	Use	Illustration
		Topside/Underside
3-thread coverstitch (2 needles)	For hemming fabrics and applying decorative effects	
4-thread coverstitch (3 needles)	For hemming fabrics and applying decorative effects	
4-thread coverstitch (2 needles)	For hemming fabrics, applying decorative effects, and using specialty thread couching	
5-thread coverstitch (3 needles)	For hemming fabrics, applying decorative effects, and using specialty thread couching	

Note: Mention or display of a trademark, proprietary product or firm in text or figures does not constitute an endorsement and does not imply approval to the exclusion of other suitable products or firms.
