# Thread Recommendations For Buttonsew, Buttonholes & Bartacks

## BUTTONSEWING

Most typical buttonsew machines in the industry are cycle machines that have the capability of making 8, 16 or 32 stitches on two & four hole flat buttons or shank buttons. The flat buttonsew clamp mechanism comes standard on these machines. Most machines can be converted over to sew shank buttons by changing the clamp and the plate with support block.

- Light weight fabrics - 2 hole flat or shank buttons attached to light weight fabrics are usually sewn with 8 stitches. Usually 4 hole flat buttons attached to light fabrics are sewn with 16 stitches. The thread generally used is a T-21 or T-27 spun or T-24 corespun thread. If the buttons have any sharp edges like metal buttons, we recommend corespun threads.
- Medium weight fabrics - 2 hole and 4 hole buttons attached to medium weight fabrics are usually sewn with 16 stitches. We recommend using a corespun thread for button attaching. Medium Wt. Fabrics = T-40 Perma Core.
- Heavy weight fabrics – 2 hole and 4 hole buttons are generally attached with 16 stitches. On some extra heavy applications, 32 stitches (double cycle) are used for attaching the button. We generally recommend using a corespun thread. Heavy Wt. Fabrics = T-60, T-80 Perma Core.

Note: most buttonsew failures are due to unraveling stitches and not thread failure. If buttonsew failure is being caused by the stitch unraveling and not breaking, we recommend using a lockstitch buttonsew machine instead of a single-thread chainstitch buttonsew machine. Make sure the same size bobbin thread is used as the needle thread. Some Retailers have even specified a slightly different color bobbin thread than needle thread so they know for sure the stitch was sewn with a lockstitch. Lockstitch buttonsew will not unravel and is very common on Infants and Childrenswear where you do not want any button failures.

## BUTTONHOLE

As you can see from the chart above, the recommended length of the buttonhole should be approximately 20 - 25% longer than the diameter of the button. On some applications with a fusible interlining, this dimension could be as low as 15% of the diameter of the button. The length of the buttonhole is measured on the inside of the buttonhole stitch from end to end. On very light weight flimsy fabrics, it might be desirable to use a smaller length of buttonhole to minimize the ease at which the button will pull through.

On the traditional buttonhole machines, in order to change the length of the BH, you have to change the cutting knife length which will require changing parts on the sewing machine. Because of this, your contractor may not be able to sew your buttonholes to your exact specifications without having to go out and buy new parts for their machines. Some newer buttonhole machines are equipped with an adjustable knife mechanism that does not require a knife change to make different buttonhole lengths.

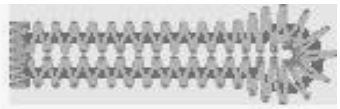
## BUTTON SIZE AND BUTTONHOLE LENGTH CHART

| Button Size (Diameter measured in Ligne) | | | Buttonhole length | Buttonhole length |
|---|---|---|---|---|
| Ligne | mm | Inch | (millimeters) | (Inches) |
| 12 | 7.5 | 5/16” | 9.0 to 9.4 mm | 11/32” – 3/8” |
| 14 | 9.2 | 3/8” | 11.1 to 11.5 mm | 7/16” – 15/32” |
| 15 | 10.0 | 13/32” | 12.0 to 12.5 mm | 15/32” – 1/2" |
| 16 | 10.5 | 5/8” | 12.6 to 13.1 mm | 1/2" – 17/32” |
| 18 | 11.6 | 7/16” | 13.9 to 14.5 mm | 17/32” – 9/16” |
| 19 | 12.0 | 15/32” | 14.4 to 15.0 mm | 9/16” – 19/32” |
| 20 | 12.7 | 1/2" | 15.2 to 15.9 mm | 19/32” – 5/8” |
| 22 | 14.2 | 9/16” | 17.0 to 17.8 mm | 21/32” - 11/16” |
| 24 | 15.1 | 19/32” | 18.2 to 18.9 mm | 23/32” – 3/4" |
| 27 | 17.0 | 21/32” | 20.4 to 21.3 mm | 13/16” – 27/32” |
| 28 | 17.8 | 11/16” | 21.4 to 22.3 mm | 27/32” – 7/8” |
| 30 | 19.1 | 3/4" | 22.9 to 23.9 mm | 29/32” – 15/16” |
| 32 | 20.5 | 13/16” | 24.2 to 25.3 mm | 31/32 – 1” |
| 34 | 21.5 | 27/32” | 25.8 to 26.9 mm | 1” – 1 1/32” |
| 36 | 23.0 | 29/32” | 27.6 to 28.8 mm | 1 1/16 – 1 3/32” |
| 40 | 25.5 | 1” | 30.6 to 31.9 mm | 1 3/32” – 1 1/8” |

There are two types of cutting methods used on buttonhole machines used in the industry:

- Cut- After Buttonhole Machines - These are by far the most common type of BH machines in use today. They sew the buttonhole first and then the knife comes down and cuts the slit in the buttonhole. This BH cutting method is more common because it minimizes “flagging” that can cause skipped stitches. It is important for the factory to properly maintain the knife sharpness and proper settings.

- Cut - Before Buttonhole Machines - These are not as common as the Cut-After BH Machines. They produce a better quality buttonhole due to the fact that they cut the fabric first and then stitch over the edge of fabric giving you a cleaner finish. However, these machines are more expensive and require better technical skills to maintain. They are primarily used on “Best quality” shirts, pants and outwear that are sewn with a fusible interlining.



Keyhole or Eyelet Buttonhole

On eyelet buttonhole applications, it is normally recommended to use a buttonhole gimp to help maintain the integrity and shape of the buttonhole. Typically a T-180 or T-210 polyester or cotton yarn is used for Gimp. A&E has two products called T-180 *Anecot*® *Gimp* which is a 100% cotton buttonhole gimp. The other product is T-210 *Anepoly*™ *Gimp* that is a 100% spun polyester buttonhole gimp.

Buttonhole Thread Recommendations:

| | | | | |
|---|---|---|---|---|
| Ex. Light Wt. | 2-4 oz | Corespun | T-24 | *Perma Core®* |
| | | Spun Poly | T-27 | *Perma Spun®, Excell®* |
| Light Wt. | 3-5 oz | Corespun | T-24, T-40 | *Perma Core®* |
| | | Spun Poly | T-27, T-40 | *Perma Spun®, Excell®* |
| Med. Wt. | 6 – 8 oz | Corespun | T-40 | *Perma Core® / D-Core®* |
| | | Spun Poly | T-40, T-60 | *Perma Spun®, Excell®* |
| Heavy Wt. | 10 – 14 oz | Corespun | T-60, T-80 | *Perma Core® NWT / D-Core®NWT* |
| | | Spun Poly | T-60 to T-90 | Perma Spun® / Excell® |

## BARTACKS

Bartacks are used to re-enforce seams and attach belt loops, straps, etc. The most common bartack sewing machine used today is a lockstitch bartacker that produces 28 stitches in the stitch cycle. On very heavy weight fabrics and on demanding applications, bartacking machines are used that produces 42 or 56 stitches in the tack. The typical clamp on a bartack machine allows for a maximum tack length of 3/4" (19.1mm) and a maximum width of approximately 5/32" (4mm).

Most manufacturers will use the same size thread for bartacking as they do for seaming. However, the maximum size thread that can generally be sewn on a bartacker without sewing issues is a T-80 thread size. Larger thread size may exceed the capacity of the hook causing poor stitch balance and fraying thread, besides causing excessive thread breakage.

You can usually increase the seam strength at bartacks by increasing the width of the bartack so the stitches catch more yarns in the fabric minimizing fabric failure at the tack.

If you need any additional assistance, please contact your local A&E Sales or GRS representative.