

Quilting Alignment Applications in Garment Manufacturing

Durafil Water Soluble Thread (WST)

Technical Application Reference Document

1. Introduction

Quilting alignment is a garment assembly operation where multiple fabric layers, padding materials, or quilted sections must be temporarily held in accurate alignment before permanent stitching is completed.

Quilted constructions are commonly used in jackets, outerwear, insulated garments, decorative textile products, and structured fabric assemblies requiring controlled positioning during sewing operations.

Because quilting operations involve multiple material layers and repeated stitch patterns, temporary stabilization is often required to maintain alignment throughout production.

Accurate quilting alignment is important for:

- Quilt pattern consistency
- Layer alignment
- Garment structure
- Sewing stability
- Production efficiency

Durafil Water Soluble Thread (WST) can be used as a temporary stitching solution during quilting alignment operations.

After washing, the temporary stitches dissolve and disappear.

2. Production Challenge

During quilting assembly, fabric layers and internal materials often require temporary stabilization before final sewing operations.

Common production challenges include:

- Shifting between quilt layers during sewing
- Movement of padding or insulation materials
- Distortion of quilting patterns
- Instability during repeated handling
- Maintaining alignment across large quilted sections

Factories traditionally use temporary stitches to stabilize quilted constructions before permanent attachment.

Because quilting operations involve multiple material layers with different movement characteristics, maintaining stable alignment throughout production can become difficult.

3. Traditional Method

In conventional garment production, temporary quilting alignment is often achieved using:

- Standard sewing thread
- Manual tacking
- Temporary holding stitches

After permanent quilting and stitching are completed, operators manually remove the temporary stitches.

4. Limitations of Traditional Temporary Stitching

Manual removal of temporary stitching may create several production issues:

- Additional labour requirement
- Slower finishing operations
- Risk of accidental fabric damage
- Inconsistent removal quality
- Increased handling time

On quilted or appearance-sensitive constructions, manual stitch removal may increase the risk of:

- Surface damage

- Shifting between quilt layers
- Quilting distortion
- Marking
- Accidental cutting of the garment

Repeated handling during stitch removal may also disturb quilt alignment and pattern consistency.

5. Durafil Water Soluble Thread (WST) Solution

Durafil Water Soluble Thread (WST) provides a temporary stitching solution for quilting alignment applications.

The thread behaves like a normal sewing thread during assembly operations, holding quilted sections and internal materials in position during garment construction.

During washing, the temporary stitches dissolve and disappear.

This removes the need for manual stitch removal after sewing.

6. Typical Quilting Alignment Applications

Durafil Water Soluble Thread (WST) may be used in applications including:

- Quilted jacket constructions
- Insulated garment assemblies
- Layered quilting panels
- Decorative quilted sections
- Padded garment stabilization
- Temporary quilt alignment before permanent stitching

The thread may be used wherever temporary quilting stabilization is beneficial during production.

7. Operational Benefits

Using Durafil Water Soluble Thread (WST) for quilting alignment can provide several operational advantages.

Improved Quilt Layer Stability

Temporary stitches help maintain accurate positioning between quilt layers and internal materials during sewing and handling operations.

Reduced Manual Labour

Because the temporary stitches dissolve during washing, manual stitch removal operations can be reduced.

Reduced Risk of Quilting Disturbance

Because temporary stitches dissolve during washing, the risk associated with manual cutting or pulling of stitches is reduced.

This is particularly beneficial for:

- Layered quilt constructions
- Lightweight quilt fabrics
- Decorative quilted surfaces
- Appearance-sensitive garment areas

Improved Production Flow

Quilting assembly operations can proceed without requiring a separate stitch removal operation after sewing.

Cleaner Garment Finishing

After washing, the temporary stitching disappears, leaving only the permanent quilting construction.

8. Garment Types

Quilting alignment applications using Durafil Water Soluble Thread (WST) may be suitable for:

- Jackets
- Outerwear
- Insulated garments
- Fashion garments
- Quilted textile constructions
- Layered garment assemblies

Production trials are recommended for specific garment constructions.

9. Production Outcome

Using Durafil Water Soluble Thread (WST) in quilting alignment operations may help garment manufacturers:

- Simplify quilting assembly workflow
- Reduce manual finishing operations
- Improve quilting consistency
- Reduce handling complexity
- Improve operational efficiency

10. Related Application Areas

Additional temporary stitching applications may include:

- Multi-layer fabric positioning
 - Temporary seam holding
 - Pleat stabilization
 - Decorative panel alignment
 - Layered appliqué constructions
-

11. Disclaimer

Performance depends on garment construction, washing conditions, and production processes.

Users are responsible for conducting suitability trials under actual production conditions prior to commercial use.

12. Technical Support

Email - info@durafil-group.com