

Technical Specification Documentation

Alteration – Related terms: fit adjustment, tailoring. A modification made to a garment after its initial construction to improve fit, style, or functionality. Example: taking in the side seams of a dress to achieve a slimmer silhouette. Practical application: essential for custom client fittings and correcting pattern errors. Challenges include maintaining fabric grain and preventing distortion of seams.

Alteration Log – Related terms: record-keeping, change history. A documented list of all alterations performed on a sample garment, noting date, technician, and specific changes. Example entry: "2026-03-10 – taken in waist by 2 cm – Jane Doe". Used to track progress and ensure transparency. Challenges involve consistent notation and integrating with digital PLM systems.

Bias Cut – Related terms: grain direction, drape. Cutting fabric on the diagonal (45°) to the warp and weft, allowing greater stretch and fluid movement. Example: bias-cut skirts that flow with the body. In technical specs, bias cut is indicated to achieve desired drape. Challenge: requires precise measurement to avoid fabric distortion.

Blocking – Related terms: shape setting, steaming. The process of shaping a garment or pattern piece to its final dimensions using steam, pins, and a form. Example: blocking a wool coat to achieve a smooth silhouette. Practical use: stabilizes fabrics prone to shrinkage. Challenges include maintaining accurate dimensions and avoiding over-stretch.

Construction Detail – Related terms: seam type, finish. Specific instructions describing how components of a garment are assembled, including stitch type, seam allowance, and reinforcement. Example: "double-stitched French seam with ¼ inch allowance". Provides clarity for manufacturers. Challenges arise when details are ambiguous or conflict with material limitations.

Cutting Diagram – Related terms: lay plan, marker. Visual representation of how pattern pieces are arranged on fabric to maximize efficiency and minimize waste. Example: a diagram showing front, back, and sleeve pieces nested on a bolt of cotton. Used to guide cutting floor staff. Challenges include translating complex shapes into a clear, readable diagram.

Fit Sample – Related terms: prototype, muslin. An early version of a garment created to evaluate fit, proportion, and construction before final fabric is used. Example: a muslin blouse tested on a fit model. Critical for identifying alteration needs. Challenges involve time constraints and material cost for multiple iterations.

Fit Specification – Related terms: size chart, tolerance. Document outlining exact measurements a garment must meet for each size, including acceptable deviation ranges. Example: "Bust 38 cm ± 0.5 cm". Guides quality control and alteration decisions. Challenges include aligning with diverse body types and maintaining consistency across production batches.

Grading Rule – Related terms: size scaling, pattern grading. Mathematical formula defining how pattern dimensions change between sizes. Example: “increase waist width by 2 cm per size”. Essential for creating size ranges from a base pattern. Challenges include ensuring proportionality and avoiding distortion in complex designs.

Grainline – Related terms: fabric grain, warp. A line on a pattern piece indicating the direction of the fabric’s warp (lengthwise) that must align with the fabric’s grain when cutting. Example: a grainline arrow on a sleeve pattern. Ensures proper drape and stability. Challenges appear when grainline conflicts with design aesthetics.

Hem Allowance – Related terms: finish edge, turn-under. The extra fabric left at the bottom of a garment to create a hem. Typically 1–2 cm for casual wear, 2–3 cm for formal garments. Example: “Hem allowance 2 cm, finished with blind stitch”. Critical for length adjustments. Challenges include maintaining uniformity across multiple pieces.

Instructional Graphic – Related terms: visual aid, diagram. Pictorial representation accompanying textual instructions to clarify a construction step. Example: a cross-section drawing showing a lining attachment. Enhances understanding for technicians. Challenges include creating clear, scale-accurate images and ensuring they match the actual product.

Joinery – Related terms: seam construction, fastening. Methods used to connect two fabric pieces, such as stitching, bonding, or mechanical fasteners. Example: “use flat-felled seam for side panels”. Determines garment durability and appearance. Challenges involve selecting appropriate joinery for fabric type and design intent.

Label Placement – Related terms: brand tag, care label. Specification indicating where brand, size, and care labels should be sewn. Example: “Brand label centered on left side seam, 1 cm from edge”. Ensures compliance with branding standards. Challenges include accommodating label size on narrow seams and maintaining aesthetic balance.

Layout Optimization – Related terms: fabric utilization, nesting. Process of arranging pattern pieces on fabric to reduce waste and improve cutting efficiency. Example: software-generated layout reducing waste by 12%. Practical for cost control. Challenges include handling irregular shapes and maintaining grainline orientation.

Material Specification – Related terms: fabric composition, weight. Detailed description of the textile used, covering fiber type, weave, weight, stretch, and finish. Example: “100 % cotton, 180 gsm, pre-shrunk, soft-finish”. Guides sourcing and informs alteration techniques. Challenges involve matching material properties to design requirements and ensuring consistency across batches.

Measurement Chart – Related terms: size guide, body dimensions. Table listing body measurements corresponding to each garment size. Example: “Size M – bust 96 cm, waist 78 cm”. Used by designers and fitters to assess fit. Challenges include accommodating regional size variations and translating to pattern adjustments.

Notch Marking – Related terms: reference point, alignment. Small cuts or symbols on pattern edges indicating where pieces should be aligned during sewing. Example: "Notch at sleeve cap to match side seam". Essential for accurate assembly. Challenges arise when notches are omitted or misinterpreted, leading to misaligned seams.

Pattern Digitization – Related terms: CAD, vector tracing. Converting hand-drawn or paper patterns into digital formats for editing, grading, and marker making. Example: scanning a paper pattern into a .dxf file. Enables rapid alterations and size scaling. Challenges include preserving accuracy during conversion and managing file versions.

Pattern Marker – Related terms: cutting layout, marker making. A compiled arrangement of all pattern pieces for a single size, used to guide fabric cutting. Example: a PDF marker showing 30 pieces per fabric width. Improves cutting speed and reduces waste. Challenges involve updating markers after pattern revisions.

Pattern Piece – Related terms: block, template. Individual segment of a garment's design, such as front, back, or sleeve, cut from fabric. Example: "Front bodice piece with dart". Each piece has its own specifications for grainline, seam allowance, and markings. Challenges include ensuring each piece aligns correctly during assembly.

Pattern Revision – Related terms: update, amendment. Documented changes made to a pattern after testing or feedback. Example: "Revision 2 – increase back waist by 1 cm". Recorded in the alteration log to maintain traceability. Challenges involve communicating revisions to all production parties and avoiding version confusion.

Pinning Technique – Related terms: temporary fastening, basting. Method of securing fabric pieces together with pins before sewing. Example: "use safety pins for delicate silk to avoid perforation". Influences ease of stitching and fabric handling. Challenges include preventing pin marks on delicate fabrics and ensuring pins do not interfere with stitch placement.

Pleat Specification – Related terms: fold, accordion. Detailed instructions on the type, depth, and spacing of pleats required. Example: "Box pleat 2 cm deep, spaced 4 cm apart". Guides accurate construction of decorative or functional folds. Challenges include maintaining uniform pleat depth across fabric types and handling bulk.

Quality Assurance (QA) Checklist – Related terms: inspection, compliance. List of criteria to verify that a garment meets technical and aesthetic standards before release. Example items: seam integrity, measurement tolerance, label placement. Ensures consistency and reduces post-production alterations. Challenges involve training staff to apply criteria uniformly and updating checklists for new designs.

Reference Sample – Related terms: master garment, benchmark. A finished garment used as the standard for comparison during production and alteration. Example: a fully finished coat kept in the design studio. Provides visual and dimensional guidance. Challenges include keeping the reference sample in pristine condition and ensuring it reflects the latest specification.

Sample Evaluation Report – Related terms: fit assessment, feedback. Document summarizing observations from testing a fit sample, including measurements, fit comments, and suggested alterations. Example: “Shoulder slope too steep – recommend raising sleeve attachment by 5 mm”. Informs subsequent pattern revisions. Challenges include translating subjective feedback into precise technical changes.

Seam Allowance – Related terms: finish edge, margin. The distance between the stitching line and the fabric edge, allowing for seam construction. Typical values: 1 cm for casual wear, 1.5 cm for structured garments. Example: “1 cm seam allowance, finished with overlock”. Critical for alteration flexibility. Challenges arise when allowances are too narrow for heavy fabrics or for later adjustments.

Seam Finish – Related terms: overlock, bias tape. Technique used to prevent raw edges from fraying and to reinforce seams. Example: “overlock 3-strand finish on interior seams”. Influences durability and aesthetic. Challenges include selecting finishes compatible with fabric stretch and ensuring they do not add bulk in tight areas.

Size Grading – Related terms: grade rule, scaling. Process of creating multiple garment sizes from a base pattern by applying grading rules. Example: “Add 2 cm to bust for each size increment”. Enables production of size ranges. Challenges involve maintaining proportion across all body dimensions and avoiding distortion in complex silhouettes.

Specification Sheet – Related terms: tech pack, product brief. Comprehensive document that consolidates all technical details of a garment, including measurements, materials, construction, and labeling. Example: a PDF containing drawings, measurement tables, and fabric swatches. Serves as the primary reference for production and alteration teams. Challenges include ensuring completeness, clarity, and up-to-date information.

Stitch Type – Related terms: seam, stitch length. Description of the stitch formation used in construction, such as straight stitch, zigzag, or blind stitch. Example: “Use a 2 mm blind stitch for hemming”. Determines strength, elasticity, and visual appearance. Challenges involve selecting appropriate stitch for fabric type and desired flexibility.

Technical Drawing – Related terms: flat sketch, illustration. Scaled, line-art representation of a garment showing front, back, and details, often accompanied by annotation. Example: a flat sketch with callouts for pocket placement. Communicates design intent to manufacturers. Challenges include conveying three-dimensional shape on a two-dimensional medium and maintaining accuracy.

Thread Specification – Related terms: yarn count, tensile strength. Information about the type, composition, weight, and color of thread to be used. Example: “100% polyester, 40 wt, white”. Impacts seam durability and visual matching. Challenges include matching thread to fabric weight and ensuring colorfastness after laundering.

Trim Specification – Related terms: hardware, embellishment. Detailed description of non-fabric components such as buttons, zippers, hooks, and lace. Example: “Metal button, 14 mm, brushed nickel”. Guides sourcing and ensures compatibility with fabric. Challenges involve coordinating trim dimensions with garment openings and ensuring they do not impede movement.

Turn-Under – Related terms: hem, edge finish. Technique of folding raw edge back onto itself and stitching to create a clean finish. Example: "Turn-under hem, stitched with blind stitch". Provides a neat interior edge. Challenges include managing bulk in thick fabrics and ensuring consistent turn-under width.

Variation Size – Related terms: plus-size, petite. Alternate sizing categories that deviate from the standard size chart to accommodate different body proportions. Example: "Petite size S – reduce length by 5 cm". Requires separate grading rules. Challenges include maintaining design integrity while adjusting proportions.

Virtual Sampling – Related terms: 3D prototyping, digital mock-up. Creation of a garment model using software to visualize fit and construction before physical production. Example: using CLO 3D to test a coat silhouette. Reduces material waste and speeds up iteration. Challenges involve software learning curve and ensuring virtual measurements match real-world outcomes.

Wear Test – Related terms: field trial, durability assessment. Evaluation of a garment's performance under real-life conditions, often involving a wearer for a set period. Example: "30-day wear test for waterproof jacket". Generates feedback on comfort, fit, and functional features. Challenges include controlling test variables and translating subjective feedback into technical adjustments.

Yoke Construction – Related terms: back panel, support. Structural element spanning the shoulders or back, often providing shape and stability. Example: "Double-layered yoke with topstitching". Influences garment drape and fit. Challenges include aligning yoke seams with underlying pattern pieces and ensuring seamless integration with alterations.

Z-Axis Adjustment – Related terms: vertical dimension, length alteration. Modification of a garment's vertical measurements, such as lengthening a skirt or shortening a sleeve. Example: "Add 5 cm to hem length using matching fabric". Requires careful planning to maintain proportion. Challenges include sourcing matching fabric, preserving seam integrity, and updating all related specifications (e.g., hem allowance).