- Hood panel and hood opening trim can be vertical or horizontal knitting.

**JACQUARD KNITTING TECHNIQUE TYPE**

**FLOAT JACQUARD:**

![Top View](image1)
![Bottom View](image2)

**INTARSIA:**

![Top View](image3)
![Bottom View](image4)
BIRDSEYE BACKING JACQUARD:

Top View

Bottom View

TUBULAR JACQUARD:

Top View

Bottom View

KNITTING REQUIREMENT

- Knitting tension must be approved by designer/technical designer.
- No bare, broken, knotted yarn on garment.
- Stitch shape must be even throughout the garment. No zigzagged stitches or skipping stitches unless desired.
- No knotted end of yarn on face side of garment. The end of yarn must be tucked inside of garment.
- All yarn must be colorfast.
- Must not have more than 5% torque on sweater.
- For printed sweater, the print quality should be uniform throughout the garment, No poor registration or dye streak. No break in print pattern.
- For float Jacquard pattern, maximum float length 1”.
- Jacquard and stripe pattern must match at side and armhole seam, unless specified by technical designer.
For open stitches such as certain types of pointelle stitches, and drop needle stitches, add special hang tag instructed by technical designer. The artwork and wording of hang tag specified by designer and all info to be in tech pack. Placement of special hang tag is specified on tech pack by technical designer.

**LINKING SEAM**
- All sweater panels must be sewn using linker, unless specified by technical designer.
- All linking seams must have stretch and strength comparable to stretch and strength of the sweater fabric itself.
- Use best practice to decide appropriate linking machine gauge.
- Generally, self-yarn as linking thread quality.
- For textured or chunky yarn, use DTM straight yarn as linking seam yarn. The factory must inform technical designer in advance, if different type of yarn needs to be used on linking seam. Linking seam yarn must have comparable performances as sweater fabric itself.
- For cotton/cotton blends, wool/wool blends yarn on fine gauge sweater (12 gg and higher) with bodice seam or seam on bodice, add stretch nylon yarn on linking seam in addition to self-yarn.
- Linking seam strength of fine gauge sweaters (12 gg and higher) must be tested and the result must meet Urban Outfitters requirement.
- Linking seam must not shrink/stretch during and after washing more than sweater’s shrinkage.

**NECK & ARMHOLE TRIM**
- Neck trim must have good recovery and stability.
- Must be knitted to height and length, unless specified by technical designer.
- Yarn from cast-on and cast-off (bind-off) edge must be cut short and tucked away properly.

**NAT #1:**
1X1 RIB SINGLE  
1X1 RIB DOUBLE
NAT #2: 2X2 RIB SINGLE

NAT #3: JERSEY TUBULAR

NAT #4: JERSEY ROLL. JERSEY ROLL CAN BE ITSELF OR CAN BE COMBINED WITH RIB TRIM.
NAT #5:
SELF EDGE ON JERSEY STITCH FABRIC. THE EDGE TENDS TO ROLL.

NAT #6:
SELF CAST-OFF ON JERSEY STITCH FABRIC WITH HALF-MILANO STITCH ON BACK SIDE. SEE PT#8 PICTURE ON “PLACKET TRIM” SECTION.

NAT #7:
ALL NEEDLE RIB (= FULL NEEDLE RIB). CAN BE VERTICAL OR HORIZONTAL KNITTING DIRECTION. ALL NEEDLE RIB STITCH LAYOUT CAN BE MODIFIED.

An example of modified all needle rib
NAT #8:
1X1 RIB WITH SCALLOP EDGE: SCALLOP DISTANCE AND HEIGHT TO BE SPECIFIED BY TECHNICAL DESIGNER.

SCALLOP EDGED 1X1 RIB TRIM.
KNOT SEPARATE & LINK TO BODY/SLV PANEL.
SCALLOP HT:
SCALLOP DISTANCE (VALLEY-VALLEY):

---

NAT #9:
SCALLOP EDGE ON TUBULAR: SCALLOP DISTANCE & HEIGHT TO BE SPECIFIED BY TECHNICAL DESIGNER.

---

NAT #10:
LINKS & LINKS STITCH STRIP

---

VERTICAL KNITTING DIRECTION
**NAT #11:**
CROCHET EDGE: CROCHET STITCH REFERENCE DETERMINED BY TECHNICAL DESIGNER. THERE ARE MANY VARIATIONS ON CROCHET PATTERNS.

**PLACKET**
- Placket trim must be knitted with proper knitting tension, so there would not be any gapping on placket edge once garment is finished.
- No gapping on placket trim edge from loose knitting tension.
- Placket trim must be knitted to length and width unless specified by technical designer.
- Use proper placket trim length, so bottom of placket or bottom of placket at hem can be straight without being pulling fabric around or hiking up.
- Sweater fabric must stay flat around placket seams. No bulging of sweater due to inappropriate placket trim length.

**PLACKET TRIM:**
Placket application type:

For 1x1 rib single/double, 2x2 rib single/double placket trim stitch reference, see ‘Bottom and cuff construction’ and ‘Neck construction’ section.

**PT #1:**
JERSEY TUBULAR TRIM ON KISSING APPLICATION.
PT #2:
SELF-FABRIC FOLD-OVER WITH KISSING APPLICATION. NO SEPARATE TRIM.

PT #3:
RIB STITCH WITH TUBULAR BASE. THE RIB STITCH LAYOUT SPECIFIED BY TECHNICAL DESIGNER.

PT #4:
GROSGRAIN TAPE DOUBLE LAYER. NO KNITTED FABRIC. PLACKET EDGE OF BODY FABRIC IS SANDWICHED BETWEEN LAYERS OF GROSGRAIN TAPE.
PT #5:
SELF-FABRIC FOLD-OVER. GENERALLY, FACED WITH ALL NEEDLE RIB (=FULL NEEDLE RIB) STRIP.

PT# 6:
ALL NEEDLE RIB TRIM. TRIM CAN BE VERTICAL OR HORIZONTAL KNITTING DIRECTION.

PT #7:
LINKS & LINKS STITCH TRIM. CAN BE VERTICAL OR HORIZONTAL KNITTING DIRECTION SPECIFIED BY TECHNICAL DESIGNER.
PT #8:
SELF EDGE WITH HALF-MILANO STITCH INSIDE AS FACING.

Face side: Jersey stitch  
Bottom view: Half-milano stitch facing

POCKETS
- Functional pocket opening must be large enough for hand to be inserted.
- Fine gauge (12gg and higher) Jersey stitch as pocket bag fabric quality using self-yarn, unless specified by technical designer.
- Pocket must be knitted to size, unless specified by technical designer.
- Pocket bag must not extend below hem, unless desired.
- Pockets must be balanced between Right and Left side.
- Top corners of pocket opening edge must be securely attached to sweater to sustain normal use.
- Tack pocket bag to garment using crochet chain stitch string to stabilize pocket bag specified by technical designer.
- Ribbed pocket opening trim must be proper length, so sweater around the edge of pocket opening would not be pulled.

PATCH POCKET:
- Self finish edge all around, unless specified by technical designer.
- Pocket placement to be specified by technical designer.
- Pocket opening trim stitch to be specified by technical designer.

Pocket with Tubular opening trim  
Pocket with Flap
WELT POCKET
- Fine gauge Jersey/Reverse Jersey stitch as pocket bag quality, otherwise specified by technical designer.

Example of Slant welt pocket

INSEAM POCKET

Top View

Bottom View with cut & sew pocket bag
KANGAROO POCKET

Example with 2x2 rib pocket opening trim

PRESSING
- All garments & garment seams must be fully pressed and wrinkle free unless specified by the Technical Designer.
- Do not over-press the center of sleeves.
- No shiny pressing marks.

SHOULDER SEAM

CUT-TO SHAPE WITH MERROW SEAM

NO FULLY-FASHIONING. CUT TO SHAPE.

INSIDE VIEW

MERROW SEAM

LINKING SM

FULLY-FASHIONED SHOULDER ON BACK PANEL

FULLY FASHIONED TO THE BACK
SHOULDER - GENERALLY, FULL FASHION MARKS
2 STITCHES FROM SEAM, MAKE SURE
SHOULDER SEAM IS NOT POSITIONED TOO
FAR TO THE BACK AND MAKE SURE
LENGTHS OF FRONT/BACK PANELS ARE
ADJUSTED SO GARMENT IS NOT HIKING
FULLY-FASHIONED SHOULDER—SEAM ON NATURAL SHOULDER

FULLY FASHIONED TO THE CENTER OF SHOULDER - NO VISIBLE FF MARKS. FRONT & BACK ARE JOINED WITH LINKING SEAM.

ZIPPERs
- Zippers must be fully operable.
- Use fine gauge (12 gg and higher) all needle rib (=full needle rib) strip as zipper facing trim to hide zipper tape.
- Use self-yarn as zipper facing quality unless specified by technical designer.
- Edge of zipper facing must not be caught during operation of zipper.
- Facing trim must be knitted to length.
- Blindstitch or handtack the edge of zipper facing to sweater.
- Use YKK zippers or equal quality must be approved by Urban Outfitters.
- Apply zipper with 301 single needle lockstitch.

ZA #1:
TUBULAR TRIM WITH HIDDEN ZIPPER TEETH

ZA #2:
TUBULAR TRIM WITH EXPOSED ZIPPER TEETH
ZA # 3:
1X1 RIB. THIS CAN BE SINGLE OR DOUBLE LAYER. ZIPPER TEETH CAN BE HIDDEN OR EXPOSED SPECIFIED BY TECHNICAL DESIGNER.

ZA # 4:
2X2 RIB. THIS CAN BE SINGLE OR DOUBLE LAYER. ZIPPER TEETH CAN BE HIDDEN OR EXPOSED SPECIFIED BY TECHNICAL DESIGNER.

ZA # 5:
SELF-FABRIC FOLD-OVER. ZIPPER TEETH CAN BE EXPOSED OR HIDDEN. GENERALLY, FACED WITH ALL NEEDLE RIB (=FULL NEEDLE RIB).
ACTIVE CONSTRUCTION STANDARDS

This is an addendum to URBAN OUTFITTERS MINIMUM QUALITY AND CONSTRUCTION STANDARDS.

This list does not include all of our standards; however, it does highlight the most important details. Any deviation from these standards must be approved by the Technical Designer prior to the start of bulk production.

Urban Outfitters reserves the right to cancel, charge back or enforce repairs on any order if our minimum construction standards are not strictly followed.

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Updated 2/14/2014
BINDINGS
BINDING JOIN SHOULD BE SET 1” BACKWARDS OF SIDE SEAM AND/OR SHOULDER SEAM UNLESS OTHERWISE NOTED

BINDING JOIN OPTIONS:

**B001:**
PRESS OPEN BINDING SEAM ALLOWANCE & SECURE WITH TWO BAR TACKS

**B002**
PRESS ALL BINDING SEAM ALLOWANCE BACK & SECURE WITH BAR TACK
**DRAWCORDS:**

All drawcords should be shipped tied in a single know bow @ CF.

**NON-CONTINUOUS** drawcords should cross behind buttonholes/eyelets/exit point @ CF before exiting through opposite buttonholes/eyelets/exit point.

**CONTINUOUS** drawcords must extend to meet the full waistband extended spec.
EDGE FINISHES

**E001:**
INSIDE BINDING
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH

**E002:**
BINDING WITH TRIM SET ON INSIDE CENTERED OVER SEAM
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH

**E003:**
BINDING WITH BINDING SET ON INSIDE CENTERED OVER SEAM
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH
**E004:**
INSIDE NECK BINDING – ARMHOLE SEAM TO ARMHOLE SEAM
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH

![Image of E004 binding](image1)

**E005:**
INSIDE NECK BINDING – SHOULDER SEAM TO SHOULDER SEAM
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH

![Image of E005 binding](image2)
**E006:**
INSIDE NECK BINDING – BACK RAGLAN TO BACK RAGLAN
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH

**E007:**
INSIDE NECK BINDING – FRONT RAGLAN TO FRONT RAGLAN
*STITCH AND BINDING WIDTH TO BE SPECIFIED BY TECH
ELASTIC:

KE001:
KNITTED ELASTIC:

WE002:
WOVEN ELASTIC

CE003:
CLEAR ELASTIC
**EB004:**
ELASTIC OVEREDGE BINDING
TOP VIEW

**BE005:**
BRA STRAP ELASTIC

**GE006:**
GRIPPER ELASTIC
ELASTIC SEAMING (for exposed elastics):

**EJ001:**
ELASTIC JOINED WITH #607 FLATLOCK (FLATSEAM)

**EJ002:**
ELASTIC SEAMED WITH #301 & FINISHED WITH 3N #605 COVERSTITCH

**EJ003:**
ELASTIC SEAMED WITH #301 & FINISHED W/ 2N #301 STRADDLING SEAM
TECH TO ADVISE STITCH WIDTH
**FABRIC:**
ALL FABRIC MUST BE TESTED FOR SEAM SLIPPAGE AT SAMPLING STAGE AND UPON RECEIPT OF BULK FABRIC. IF SEAM SLIPPAGE IS FOUND, ALL SEAMS MUST BE FUSED WITH DTM TRICOT FUSIBLE.

**HEAT TRANSFERS:**
HEAT TRANSFERS MUST BE APPLIED FOLLOWING SUPPLIERS SPECIFICATIONS
VISIBLE “HALO” (DISCOLORATION OR RESIDUE) AROUND HEAT TRANSFER AFTER APPLICATION IS NOT ACCEPTABLE.

VISIBLE HALO - NOT ACCEPTABLE  NO VISIBLE HALO - IDEAL
HEMS

H001:
TURNBACK W/ ISO #406
TURNBACK & STITCH HEIGHT TO BE SPECIFIED BY TECH

H002:
TURNBACK W/ ISO #602
TURNBACK & STITCH HEIGHT TO BE SPECIFIED BY TECH
**H003:**
TURNBACK W/ ISO #605
TURNBACK & STITCH HEIGHT TO BE SPECIFIED BY TECH

**H004:**
PULLED MERROW (ISO#503)
TURNBACK HEIGHT TO BE SPECIFIED BY TECH
**H005:**
SELF FACING SET W/ 2N #301 LOCKSTITCH
HEIGHT & STITCH HEIGHT TO BE SPECIFIED BY TECH

**H006:**
SELF FACING SET W/ 2N #602
HEIGHT & STITCH HEIGHT TO BE SPECIFIED BY TECH
**H007:**
SELF FACING SET W/ 3N #605
HEIGHT & STITCH HEIGHT TO BE SPECIFIED BY TECH

**INTERFACING:**

*WE HAVE SELECTED FUSE OPTIONS FOR ACTIVE PRODUCT: LIGHT WEIGHT, MEDIUM WEIGHT AND HEAVY WEIGHT. THE PCC INFORMATION SHEET FOR EACH WEIGHT IS ATTACHED. ALL SPECIFICATIONS MUST BE FOLLOWED.*

*WHITE FUSE SHOULD ONLY BE USED ON WHITE FABRICS. NATURAL AND BLACK SHOULD BE USED TO CLOSEST MATCHING COLOR.*

*DTM FUSE SHOULD BE USED ALL ANY TRANSPARENT FABRICS AND FUSED SEAMS*
- Light Weight Fusible Tricot Knit = PCC style # KF121
- Mid Weight Fusible Tricot Knit = PCC style # KF789
- Heavy Weight Fusible Tricot Knit = PCC style # KF501
- Lightweight Fusible Stretch Woven Option = PCC style # PX313
  o comes in colors
  o good choice for fusible strips when having seam slippage
- Light Weight Fusible Non-Woven = PCC style # KF100
- Mid Weight Fusible Non-Woven = PCC style # KF230
- Heavy Weight Fusible Non-Woven = PCC style # KF240
- Fusible Armhole Seam Tape = PCC style # TP500 or TP3000
- Fusible Seam Tape (for shoulder seams; lapel roll lines ect.), = PCC style #
  TP4000, TP5000 or TP6000
- Fusible Waist Band Seam Tape = PCC style # TP5000
Specification Sheet

GARMENT APPLICATIONS

☐ Blouses  ☐ Light Jacket  ☐ Plackets  ☐ Stone wash
☐ Dresses  ☐ Heavy Jacket  ☐ Waistbands  ☐ Garment dye
☐ Shirts  ☐ Coats  ☐ Embroidery
☐ Raincoat
☐ Special Applications:

TECHNICAL INFORMATION

Width: 60 inches (152 cm)
Put-up: 200 yards (182.88 m)
Colors: White, Black
Total Weight: 1.60 oz (54 gsm)

Base Fabric

Construction: Circular Knit
Fiber content: Polyester

Adhesive Coating

Resin type: Polycrystalline
Mesh: 22 mesh

Fusing Conditions

Electric Press
Temperature (Fuseline): 240-260°F (116-143°C)
Time: 12-14 seconds
Pressure: 3-4 bar

CARE INSTRUCTIONS

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

ISO 9001 CERTIFIED

200 MALTESE DRIVE, TCTOWA, NEW JERSEY 07512-1404 • (973) 890-3873 • FAX (973) 785-8180
Email: pco@pco-usa.com

Date: 3/1/2001  Rev. 0
## Specification Sheet

### GARMENT APPLICATIONS

- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications:

### TECHNICAL INFORMATION

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<th>Parameter</th>
<th>Value</th>
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<td>Width</td>
<td>60 inches (152 m)</td>
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<tr>
<td>Put-up</td>
<td>200 yards (182.88 m)</td>
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<tr>
<td>Colors</td>
<td>White, Black, Natural</td>
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<tr>
<td>Total Weight</td>
<td>2.00 oz (56 gsm)</td>
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#### Base Fabric

- Construction: Circular Knit
- Fiber content: Polyester

#### Adhesive Coating

- Resin type: Polymide
- Mesh: 17 mesh

#### Fusing Conditions

- Temperature (Fuseline): 240-290°F (116-143°C)
- Time: 12-14 seconds
- Pressure: 4-6 bar

### CARE INSTRUCTIONS

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Email: pco@pcousa.com

Date: 3/1/2001  Rev: 1
# Specification Sheet

## GARMENT APPLICATIONS
- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone Wash
- Garment Dye
- Special Applications:

## TECHNICAL INFORMATION

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<td>Width</td>
<td>60 inches (152 cm)</td>
</tr>
<tr>
<td>Put-up</td>
<td>200 yards (182.88 m)</td>
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<tr>
<td>Colors</td>
<td>White, Black</td>
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<tr>
<td>Total Weight</td>
<td>1.80 oz (61 gsm)</td>
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### Base Fabric
- Construction: Circular Knit
- Fiber content: Polyester

### Adhesive Coating
- Resin type: Polycrime
- Mesh: 17 mesh

### Fusing Conditions
- Electric Press

<table>
<thead>
<tr>
<th>Condition</th>
<th>Setting</th>
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<tbody>
<tr>
<td>Temperature ( Fuseline)</td>
<td>240-290°F (116-143°C)</td>
</tr>
<tr>
<td>Time</td>
<td>12-14 seconds</td>
</tr>
<tr>
<td>Pressure</td>
<td>4-5 bar</td>
</tr>
</tbody>
</table>

## CARE INSTRUCTIONS

![Instructions Icons]

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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Email: pco@pcousa.com

Date: 3/1/2001 Rev. 205
Specification Sheet

GARMENT APPLICATIONS

- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications:

TECHNICAL INFORMATION

- Width: 60 inches (152 cm)
- Put-up: 109.36 yards (100 m)
- Colors: White, Gray, Black
- Total Weight: 1.06 oz (36 gsm)

Base Fabric

- Construction: Thermal-bonded nonwoven
- Fiber content: Nylon/Polyester

Adhesive Coating

- Resin type: Polyamide
- Mesh: 25 mesh

Fusing Conditions

- Electric Press
- Temperature (Fuseline): 240-290°F (116-143°C)
- Time: 12-14 seconds
- Pressure: 4-5 bar

CARE INSTRUCTIONS

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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Email: pco@pcousa.com

Date: 3/1/2001 Rev: 1
### Specification Sheet

#### GARMENT APPLICATIONS

- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications:

#### TECHNICAL INFORMATION

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<tr>
<td>Width</td>
<td>60 inches (152 cm)</td>
</tr>
<tr>
<td>Put-up</td>
<td>200 yards (182.88 m)</td>
</tr>
<tr>
<td>Colors</td>
<td>White, Charcoal</td>
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<tr>
<td>Total Weight</td>
<td>1.10 oz (37 gsm)</td>
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#### Base Fabric

- **Construction:** Thermal-bonded nonwoven
- **Fiber content:** Polyester

#### Adhesive Coating

- **Resin type:** Polycamide
- **Mesh:** 17 mesh

#### Fusing Conditions

- **Electric Press**
- **Temperature (Fuseline):** 240-290°F (116-143°C)
- **Time:** 12-14 seconds
- **Pressure:** 4-5 bar

#### CARE INSTRUCTIONS

![CARE INSTRUCTIONS ICONS]

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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Email: pcc@pccusa.com

Date: 3/1/2001 Rev. 1

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20
Specification Sheet

GARMENT APPLICATIONS

☐ Blouses  ☐ Light Jacket  ☐ Plackets  ☐ Stone wash
☐ Dresses  ☐ Heavy Jacket  ☐ Waistbands  ☐ Garment dye
☐ Shirts  ☐ Coats  ☐ Embroidery
☐ Raincoat

Special Applications:

TECHNICAL INFORMATION

Width: 60 inches (152 cm)
Put-up: 100 yards (91.44 m)
Colors: White, Charcoal
Total Weight: 1.40 oz (47 gsm)

Base Fabric

Construction: Thermal-bonded nonwoven
Fiber content: Polyester

Adhesive Coating

Resin type: Polyamide
Mesh: 17 mesh

Fusing Conditions

Electric Press
Temperature (Fuseline): 240-290°F (116-143°C)
Time: 12-14 seconds
Pressure: 4-5 bar

CARE INSTRUCTIONS

This above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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Email: pco@pco-usa.com

Date: 3/1/2001  Rev. 1 21
### Specification Sheet

#### GARMENT APPLICATIONS
- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications: Tape

#### TECHNICAL INFORMATION
- **Width:** 3/8 inch (9.525 mm)
- **Put-up:** 500 yards (Spool)
- **Colors:** White, Black
- **Total Weight:** ( )

### Base Fabric
- **Construction:** Nonwoven w/woven (off center)
- **Fiber content:** Nylon/Polyester/Cotton

### Adhesive Coating
- **Resin type:** Polyamide Powder Dot
- **Mesh:**

### Fusing Conditions
- **Electric Press**
- **Temperature (Fuseline):** 250-270°F (121-132°C)
- **Time:** 6-10 seconds
- **Pressure:** 2-4 bar

### CARE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Instruction</th>
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<tbody>
<tr>
<td>🔴</td>
<td>Cold Wash</td>
</tr>
<tr>
<td>🔴</td>
<td>Do Not Bleach</td>
</tr>
<tr>
<td>🔴</td>
<td>Do Not Tumble Dry</td>
</tr>
<tr>
<td>🔴</td>
<td>Line Dry</td>
</tr>
<tr>
<td>🔴</td>
<td>Do Not Iron</td>
</tr>
<tr>
<td>🔴</td>
<td>Wash Separate</td>
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The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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Date: 3/1/2001 Rev. 1
## Specification Sheet

### GARMENT APPLICATIONS
- [ ] Blouses
- [ ] Dresses
- [ ] Shirts
- [ ] Light Jacket
- [ ] Heavy Jacket
- [ ] Coats
- [ ] Raincoat
- [ ] Plackets
- [ ] Waistbands
- [ ] Embroidery
- [ ] Stone wash
- [ ] Garment dye
- [ ] Special Applications: Tape

### TECHNICAL INFORMATION

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<tr>
<td>Put-up</td>
<td>500 yards (Spool)</td>
</tr>
<tr>
<td>Colors</td>
<td>White, Black</td>
</tr>
<tr>
<td>Total Weight</td>
<td>()</td>
</tr>
</tbody>
</table>

#### Base Fabric
- **Construction:** Single Stitch/Nonwoven
- **Fiber content:** Nylon/Polyester

#### Adhesive Coating
- **Resin type:** Polycamide Powder Dot
- **Mesh:**
- **Fusing Conditions**
  - **Electric Press**
  - **Temperature (Fuseline):** 250-270°F (121-132°C)
  - **Time:** 6-10 seconds
  - **Pressure:** 2-4 bar

### CARE INSTRUCTIONS

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

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ISO 9001 CERTIFIED

200 MALTESE DRIVE, TOTOWA, NEW JERSEY 07512-1404 • (973) 890-3873 • FAX (973) 785-8180
Email: pcc@pccusa.com

Date: 3/1/2001 Rev. 1
Specification Sheet

GARMENT APPLICATIONS
- Blouses
- Dresses
- Shirts
- Light Jacket
- Heavy Jacket
- Coats
- Raincoat
- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications: Tape

TECHNICAL INFORMATION
- Width: 3/8 inch (9.525 mm)
- Put-up: 500 yards (Spool)
- Colors: White, Black
- Total Weight: ( )

Base Fabric
- Construction: Single Stitch/Nonwoven
- Fiber content: Nylon/Polyester

Adhesive Coating
- Resin type: Polycamide Powder Dot
- Mesh:

Fusing Conditions
- Electric Press
- Temperature (Fuseline): 250-270°F (121-132°C)
- Time: 6-10 seconds
- Pressure: 2-4 bar

CARE INSTRUCTIONS

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- Plackets
- Waistbands
- Embroidery
- Stone wash
- Garment dye
- Special Applications: Tape

**TECHNICAL INFORMATION**

- **Width:** 3/8 inch (9.525 mm)
- **Put-up:** 100 yards (91.44 m)
- **Colors:** White, Black
- **Total Weight:** ( )

**Base Fabric**

- **Construction:** Stitch-reinforced nonwoven
- **Fiber content:** Nylon/Polyester

**Adhesive Coating**

- **Resin type:** Polyamide/Polyester
- **Mesh:** Paste Cot

**Fusing Conditions**

- **Temperature (Fuseline):** 250-270°F (121-132°C)
- **Time:** 6-10 seconds
- **Pressure:** 2-4 bar

**CARE INSTRUCTIONS**

![Caret instructions]

The above instructions are to be used as a guideline. Because of variables in fabrics and garment manufacturing, we recommend that all fused samples and garments be tested for performance prior to garment production.

**ISO 9001 CERTIFIED**

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200 MALTESE DRIVE, TOTOWA, NEW JERSEY 07512-1404 • (973) 890-3873 • FAX (973) 785-8180

Email: pco@pcousa.com

Date: 3/1/2001 Rev. 1
LOCKER LOOPS
USE THE BELOW SPECIFICATIONS UNLESS OTHERWISE NOTED IN THE TECH PACK

THREAD:
MICRO-FILAMENT TEXTURED POLYESTER THREAD MUST BE USED ON ALL LOOPERS FOR ALL COVERSTITCH, OVERLOCK, AND CHAINSTITCH APPLICATIONS ON ALL KNITS UNLESS OTHERWISE APPROVED BY TECHNICAL DESIGNER. COATS SEAMSOFT IS PREFERED

TOPSTITCH & SEAMS:
ISO#301: SINGLE NEEDLE LOCKSTITCH
  *10-12 SPI
ISO#304: ZIGZAG
  *8 CYCLES PER INCH
ISO#304: BUTTONSEW (4 hole)
  *16 per button
ISO#304: BUTTONHOLE (1/2’’)
  *85-90 total per buttonhole
ISO#304: BARTACK (1/4’’)
  *24-28 PER TACK
ISO#401: CHAINSTITCH
  *10-12 SPI
ISO#404: ZIGZAG CHAINSITCH
  *10-12 SPI
ISO#406: 2 NEEDLE BOTTOM COVERSTITCH
   *14-16 SPI
ISO#407: 3 NEEDLE COTTON COVERSTITCH
   *14-16 SPI
ISO#408: 2 NEEDLE CHAINSTITCH WITH COVER THREAD
   12-14 SPI
ISO#502: PURL MERROW
   22-26 SPI
ISO#503: 2 THREAD OVEREDGE
   *ALSO USED FOR BLINDSTITCHING AND PULLED MERROW STITCH
   12-14 SPI
ISO#504: 3 THREAD OVEREDGE (COMMON)
   12-14 SPI
ISO#505: 3 THREAD OVEREDGE (DBL PURL)
   12-14 SPI
ISO#512: MOCK SAFETY STITCH
   12-14 SPI
ISO#516: 5 THREAD SAFETY STITCH
   STANDARD APPLICATION FOR ALL SAFETY SEAMS
   12-14 SPI
ISO#514: DOUBLE NEEDLE 4 THREAD OVEREDGE**
   STANDARD APPLICATION FOR ALL KNIT SEAMS
   12-14 SPI
ISO#602: 2 NEEDLE 4 THREAD COVERSTITCH
   14-16 SPI
ISO#605: 3 NEEDLE 5 THREAD COVERSTITCH
   14-16 SPI
ISO#607: FLAT SEAM**/**
   16-18 SPI

*ALL SPI ARE STANDARD REQUIREMENT, UNLESS OTHERWISE REQUESTED IN TECH PACK.

**ANY BASTING STITCHES USED TO SET SEAMS FOR THESE APPLICATIONS MUST BE CRACKED BEFORE SHIPPING.

***MESH/PRINTED FABRICS SHOULD ALWAYS BE BOTTOM PLY OF LAPPED SEAM UNLESS OTHERWISE NOTED OR UNLESS NOT POSSIBLE.

****ALL SEAMS SHOULD STRETCH TO THE FULLEST EXTENSION OF THE FABRIC WITHOUT BREAKING THREADS.

*****ALL SEAMS SHOULD BE CONSTRUCTED AS FLAT AS POSSIBLE WITH CONSIDERATION FOR COMFORT OF THE WEARER IN MIND.
ISO #607:

TOP VIEW

BOTTOM VIEW

ISO #605 STRADDLING SEAM:

TOP VIEW

BOTTOM VIEW

ISO #605 ALONG SEAM:

TOP VIEW

BOTTOM VIEW
ZIPPERS:

ZIPPER GARAGES:
ZIPPER GARAGES (WHERE REQUESTED) SHOULD BE 2 PLY WITH FOLD @ OPEN EDGE
CLEAN FINISHED INTO SEAMS
GARAGE SHOULD BE DEEP ENOUGH TO CONCEAL ZIPPER HEAD

ZIPPER FACINGS/GAURDS:

PARTIAL ZIPPER FACING WITH GUARD @ TOP
FULL ZIPPER FACING WITH GUARD @ TOP

ZIPPER TAPE FINISHES:

**Z001:**
ZIPPER TAPE & SEAM ALLOWANCE CLEAN FINISHED WITH
¼" DOUBLE FOLD OVEREDGE BINDING
Z002:
ZIPPER TAPE & SEAM ALLOWANCE CLEAN FINISHED WITH SELF FACING WIDTH TO BE SPECIFIED BY TECH

ZIPPER ENDS:
EXPOSED ZIPPER ENDS – SHOULD NOT BE MORE THAN 1/8” AWAY FROM FINISHED EDGE
Check list for evaluating fit samples:

1. Garment should be on form or body properly & naturally. (do not force position)
2. Evaluate shoulder placement, should be aligned with form naturally (do not force)
   * HPS : back fold line when laying flat on table. It does not line up with the shoulder seam on the Alva form
3. Bodice or Waistband must be level all around, unless noted in the TP or clearly sketched.
   a. If there are no drag lines the adjustment can usually be made at the bottom of the seam.

BODY IS BALANCED FRONT TO BACK BUT NOT LEVEL AT WAIST

*SHORTEN BODICE TO MAKE LEVEL
* IF SKIRT IS ATTACHED:
  CHECK TO SEE IF BALANCED AFTER BODICE CORRECTION
  MAY NEED TO INCREASE OR DECREASE FROM SKIRT AT WAIST
b. If there are drag lines pulling and bust looks too flat usually means the bust area is too tight or flat against the apex. This will not be corrected by adding to the side seams to increase chest. To make this correction the garment must be released where it needs it, at the apex. Cut thru garment over the apex, each side. This will determine how much to add, then you must figure out where the excess fullness under the bust will go. It will either be increased shirring, excess evenly distributed into darts or if the body has style lines the fullness will be darted out of actual pieces with no visible dart or shirring.

BODICE IS BALANCED / TOO TIGHT AT CHEST
4. UNBALANCED BODICE is typically long in the back and kicks out towards front.
   a. If the bodice kicks out towards the front and back is dragging it has a balance issue. In most cases the center front area is too short and it is corrected by picking up the sides with a dart. This may continue straight thru the back if the back is dragging or if the front length is preferred.
   b. This excess fullness will remain a dart or needs to be re-distributed either into a style line like a princess seam or pivoted to an area to take the excess.

UNBALANCED BODICE:
* FRONT IS HIKING & KICKING OUT
* SIDE MUST BE PICKED UP & REDUCE BACK HEIGHT
* WHEN FRONT DARTS OUT, IT MUST OPEN
IN ANOTHER PLACE, THIS EXCESSFULLNESS WILL BE DISTRIBUTED IN DARTS, SHIRRING OR STYLE OPTION
5. Waistbands must have proper contour. The back will typically have the most contour for the small of the back.
   a. Waistbands above the natural waistline are a slight frown shape (convex)
   b. Waistbands below the waistline, slight smile (concave).
6. Skirts: If skirt is balanced with same fullness all around the hem should be corrected by measuring from the floor to add or take off where needed. If the skirt has a problem with balance, the corrections need to happen from the waist.
   a. if the front kicks outward, 2 options to correct depending on preferred front length or back length
   b. prefer back length: add to skirt at front waist to 0 @ CB if side seams are forward or front hike is so severe.
   c. prefer front length: reduce back length from waist to 0 @ CF front if side seams are forward and hike is very severe.
   d. This usually will level hem however once balance is accomplished with same fullness all around check hem level at front sides and back to make sure all sides are even with the floor.

BACK SKIRT IS DROPPING AGAINST BACKSIDE
FRONT SKIRT KICKS AWAY FROM LEGS
BACK HEM IS NOT LEVEL FROM THE FLOOR

CORRECTION
*PICK UP BACK / SIDE @ WAIST TO KEEP FRONT LENGTH

OR

CORRECTION
*DROP FRONT / SIDE @ WAIST / TO KEEP BACK LENGTH

*ONCE SKIRT IS BALANCED CHECK HEM LEVEL
IF STILL NOT LEVEL, TAKE FROM BOTTOM
7. Overall dress balance on the body / form:

**CORRECT BALANCE**

**IN-CORRECT BALANCE**

**BACK BODICE IS DROPPING CAUSING FRONT TO HIKE UP & BACK SKIRT TO DROP AGAINST BACKSIDE**
**FRONT SKIRT KICKS AWAY FROM LEGS**
**BACK HEM IS NOT LEVEL FROM THE FLOOR**

**CORRECTION**

*PICK UP BODICE AT SIDE TO LEVEL WITH CF & APEX CONTINUE STRAIGHT THROUGH BACK THIS WILL ALSO HELP TO BALANCE SKIRT*

**IF FURTHER CORRECTION IS NEEDED TO BALANCE SKIRT**
*PICK UP BACK / SIDE SKIRT AT WAIST*

*ONCE SKIRT IS BALANCED CHECK HEM LEVEL IF STILL NOT LEVEL, INCREASE OR REDUCE FROM BOTTOM*
8. Dart Manipulations:

a. When creating stylized patterns, darts is where the thought process begins

b. Darts cannot be eliminated from a pattern/block unless it is a very loose unstructured style

c. The dart fullness must be interpreted somewhere to maintain a well-fitting garment

d. Always use style seams when possible to incorporate or eliminate darts

9. Sleeve Cap should be centered with shoulder seam or natural shoulder on form if garment has a forward shoulder seam.
10. Pattern Corrections from Tech Comments

Tech Comments advised from the garment may tell a different story than what the pattern will allow.

The pattern may be properly executed….this means that this problem is elsewhere. This is when it is so important that the patternmaker has the sample, can put it on the Alva form and understand what we are trying to accomplish. The patternmaker may be forced to choose a different method of correcting to keep pattern properly balanced and ultimately will accomplish the same correction intended.
**Production**

1) Factory must have a correct pre-production sample that can be used as a reference on the production floor BEFORE you start production. This sample should incorporate all the comments made in the tech pack and should have the correct construction, fabric & trims. The line manager should check production against this sample and correct any problems while the style is being manufactured.

2) Shrinkage tests should be taken on several rolls within EACH lot. The test fabric should be taken from well into each roll. If needed separate markers should be made for each lot. We do not want sewing or shrinkage problems to adversely effect the sales results.

- Check that all button sewing meets our requirements
- Check all hardware functionality and perform pull tests
- Check all closures are aligned properly
- Measure all fit samples before sending, place measurements into PDM or send attached to tag
- Always send photos & questions regarding concerns
URBN STANDARDS FOR

UNDERWIRE BRAS & MOLDED CUP BRAS

Amanda Hunt • Tammy England • July 2015
WIRES, BONING AND CASINGS

WIRE -
NON COATED METAL
WITH DIPPED ENDS

WIRE/BONE CASINGS -
BRUSHED CASING WITH
A RIBBON BACKING

OUTSIDE

INSIDE

BONING-
3/16” FLEXIBLE
PLASTIC BONE
WITH ROUNDED
EDGES
STANDARD WIDTH ELASTICS

BOTTOM OPENINGS - 3/8” SOFT KNIT ELASTIC WITH BRUSHED SIDE AGAINST SKIN

3/8” STRAP ELASTIC WITH BRUSHED SIDE AGAINST SKIN
Bra Findings

**J-Hook**

Hook faces out. This allows wearer to hook strap rings together to switch to racerback styling.

**V-Wire / U-Wire**

Padding must be added to construction for comfort.
Graduated Cup

Molded cup with no bump. Padding is slightly thicker @ apex and tapers along the edges.

1.5 MM foam @ neckline and armhole edge
Bump Pad (Cookie or Bra Pad)

Removable or non-removable bottom cup padding usually made of fiber-fill, lightweight silicone or thermoplastic polyurethane (TPU) and filled with air, water or oil.
Bras with removable bump pads must have a hidden internal pocket at the bottom of the cup. The pocket opening can be at the armhole side or center of the cup.
**Bump Cup**

Molded cup with non-removable bump pad shaped into inside of cup.
Rouleau or Spaghetti Strap

Thin tubes made of fabric, ribbon or elastic, generally 1/8” in diameter. The cylindrical shape differentiates a rouleau from a 1/8” wide ribbon or flat elastic strap.

Strap elastic must be trimmed 1/16” from bartack
BRA LININGS:

*POWER MESH- NYLON/SPAN BLEND WITH STRETCH, USED TO LINE SHEER FABRICS ALL OVER FOR SUPPORT AND OPACITY. FABRIC WEIGHT CAN VARY FROM LIGHT TO MAX SUPPORT

*15 DENIER STRETCH TRICOT (TRICOT MESH) - 100% NYLON WITH MECHANICAL STRETCH, USED TO LINE SHEER FABRICS FOR SUPPORT AND OPACITY. MOSTLY USED ON UNDERWIRE CUPS. ALSO USED FOR SIDE SLINGS ON LARGER CUP SIZES

*15 DENIER STABILIZED TRICOT (RIGID MESH) - 100% NYLON, NO STRETCH. USED AT FRONT AND SIDE CRADLE TO STABALIZE WIRE. CAN BE FUSED TO SELF FABRIC TO ELIMINATE PUCKERING/STRETCHING
Cup Placement at Frame

Cups can be set to the Interior of the frame or the exterior of the frame. Both will always have the felt channeling at interior for the underwire. Bras with no under bust frame will always be set to the exterior.
**Construction Options**

**3 step zig zag stitch** OR **Merrow & 1 step zig-zag stitch** (a.k.a. baby zig-zag stitch): To join body to wider bottom band. Zig-zag stitch is visible at face.
3 step zig zag stitch – For armhole, wing top edge & bottom edge elastic. Excellent for joining elastic to a body fabric that has a lace edge. All stitching is visible at face.

1 step zig-zag stitch, turn & topstitch with 1 step zig-zag stitch – For armhole, cup top edge & wing top edge & bottom edge elastic. Stitching is less obvious/ visible, only topstitch zig-zag is visible at face.
1 step zig-zag stitch, turn & topstitch with 1/8”gg 2N bottom coverstitch #406– For bottom edge elastic. Sporty look with 2N stitch only visible at face.

1/4” - 5/16” elastic in turnback, 3/16”gg 2N Bottom Coverstitch #406 – For bottom edge. Sporty/ clean look. Good option for when elastic cannot be DTM.
1/8” gg Top & Bottom coverstitch straddling binding edge #602 – For armhole, neckline edge and back top edge. Smooth clean finish, blurs binding edge for clean look. Top & Bottom coverstitch is visible at face.

Clean finish to cup – For contoured cup top edge. Must be joined to a molded cup top edge, cannot be used on non-foam cups. Clean look, no visible stitches.
**SN Topstitch at Binding** – For cup top edge. Limited stretch at top edge, not ideal for fabric cups with a lot of stretch. All stitching is visible.

**2N Bottom coverstitch at Binding #406** – For cup top edge & armhole. Better stretch than single needle version, but more sporty look. 2N stitch is visible.
Clear mobilon or 1/8” tape elastic with 1 step zig-zag stitch – For cup top edge & lace edges that are turning/rolling. Use on a cup that is using the fabric’s lace edge at top edge. Excellent for correcting stretch lace that is turning or rolling – apply elastic tape 1/16” from lace edge. Zig-zag stitch is visible at face but depending on the lace pattern & placement, the stitches are usually hidden.
**Tack fabric to cup in 4-5 places along edge**—For cup top edge. Use on a cup that is using the fabric’s lace edge at top edge. If sewing tension is correct, the stitches are not visible.

**SN Topstitch along edge**—For cup top edge. Use on a cup that is using the fabric’s lace edge or decorative trim at top edge. Stitches can be hidden in trim or in lace pattern.
**Tricot Tape along inside top edge**—For cup top edge. Use on a cup where stretch along top edge is not desired. Can be used on a molded cup with clean finish edge to correct a stretched edge. The visibility of stitches depends on construction.

**Silicone Elastic for Strapless Bras**—Set along top or both top/bottom edges of strapless styles to keep bra in place. Standard width is 3/8” with 1/8” row of silicone in center. Set on with baby zig zag @ top and bottom edges of elastic through to self.