



Pants, Cargo, Male & Female

Purchase Description



File no. CBSA/ASFC-2012-09-110
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PURCHASE DESCRIPTION

PANTS, CARGO, MALE & FEMALE

1. SCOPE

This purchase description describes the requirement for materials, design, construction and inspection of a male and female cargo pocket pant for use by Border Service Officers (BSO) within the Canada Border Services Agency (CBSA).

2. GENERAL REQUIREMENTS

- 2.1. **DESIGN** - The cargo pant shall be constructed from a poly/cotton material as specified in "Table I" attached. The overall design of the pants shall incorporate two slash front pockets, two bellows style pleated cargo pockets with hook and loop closure, two rear welt pockets with buttons. The waistband shall have the ability to expand and come complete with a rubber waistband gripper. The legs shall incorporate double knees, neoprene knee pads and a permanent sewn down crease. The leg bottoms shall remain unfinished.
- 2.2. All articles or materials covered by this purchase description shall be free from imperfections or blemishes such as may affect its appearance or serviceability.
- 2.3. In the event of any inconsistency in the contract documents, purchase description, drawings, or sealed samples. The aforementioned shall prevail in the following order:
 - I) Contract
 - II) Purchase Description
 - III) Drawings
 - IV) Sealed Sample

3. SEALED SAMPLE

A sealed sample, identified by the purchase description number noted in the contract, will be supplied to the successful tenderer if available. This will constitute the standard in regards to any properties not identified within. Variation from the purchase description may appear in the sample in which case the purchase description shall govern unless otherwise identified on the sealed sample tag.

The sealed sample will be sent "prepaid" and is to be returned "prepaid".

The sealed sample is to be returned to CBSA in the same condition as received by the manufacturer. Lost or damaged sealed samples shall be replaced by an identical item or the CBSA shall be reimbursed for the cost of an acceptable replacement.

4. APPLICABLE SPECIFICATIONS

- 4.1. CAN/CGSB 4.2, Textile Test Methods.
- 4.2. CAN/CGSB-4.1, 131-93 Thread, Polyester, Polyester-Covered.
- 4.3. ISO 4915, International Standard for Textiles - "Stitch Types".
- 4.4. ISO 4916: 1991, International Standard for textiles "Seam Types".
- 4.5. CAN/CGSB-86.1, Standard for Care Labeling of Textiles.

5. DETAILED REQUIREMENTS

5.1. MATERIALS

- 5.1.1. **Shell Material** - As per "TABLE I" attached.
- 5.1.2. **Lining Material (Waistband)** - Plain weave poly/cotton material, mass of $95\text{g/m}^2 \pm 5\%$. The colour shall be black or navy to match the shell material and meet no less than Grade 3 on the grey scale after 5 washes for Colourfastness to Laundering (CAN/CGSB-4.2 Method 19.1M90 Test 2) with a maximum shrinkage of no more than 3%. **Certification of Compliance required for lining material used.**

- 5.1.3. **Seam & Stitching Thread** - Shall be polyester core, polyester wrap, Class B, R50 Tex, Type 1 Soft of matching colour, meeting CAN/CGSB 4.131-93.
- 5.1.4. **Buttonhole and Bar-Tack Thread** - Shall be polyester core, polyester wrap, Class B, R50 Tex, Type 1 Soft of matching colour, meeting CAN/CGSB 4.131-93.
- 5.1.5. **Buttons** - Rear pockets shall be plastic, four-hole, 15mm, of matching shade to the shell material. Fly front shall have a 19mm nylon composition Military strap button, of matching shade to the shell material.
- 5.1.6. **Bar Tacks** - The bar tacks for the fly fronts and pockets shall be 13 mm in length with no less than 18 cover stitches per tack. Belt loop bar tacks shall be 17mm in length.
- 5.1.7. **Slide Fastener** - Shall be a closed ended, brass slide fastener with Y type teeth 4.5mm chain width. There shall be a semi-locking slider complete with a stainless steel locking pin, and brass pull tab. The tape shall be comprised of polyester yarn and shall be black in colour. One bottom stop shall be used with a minimum of one top-stop. The length of the slide fasteners shall be as outlined below. (measured from the top end of the slider to the tip of the bottom stop) YKK-459½ is known to meet this requirement. **Certification of Compliance required.**

RISE - all sizes Male & Female	Lengths - In inches
Short	6½"
Regular	7"
Tall	7½"

- 5.1.8. **Waist-banding** - Shall be made from waistband lining as specified in para 5.1.2 and shall have a finished width of 6cm (2 3/8"). The waist-banding shall be constructed with the following components, a rubber inner grip, non-woven interlining and no-roll reinforcement. The rubber inner grip shall have a finished width of 1.27cm (1/2"). The waist-banding shall meet a grey scale of 3 minimum and be washable up to 60°C with a maximum shrinkage of no more than 3%.
- 5.1.9. **Hook and Loop Tape** - Shall be woven nylon, black in colour, with a high life cycle. The width shall be 2.5cm (1") with lengths as specified in the purchase description and drawings. The combined hook and loop shall have no less than 8 P.S.I length-wise shear strength and initial peel strength shall of not less than 1 P.I.W and after 1000 cycles.

- 5.1.10. **Elastic** - Used in the construction of the waistband. Commercially available, black knitted elastic, non-roll, and pre-shrunk, equal in respect to the sealed sample for durability, stretch and recovery. It shall be 2.5cm wide (1") in width.
- 5.1.11. **Knee Pads** - Two knee pads shaped and dimensioned to the sealed sample shall be made from 5mm thick Neoprene, black in colour equal in all respects to the sealed sample.

6. GENERAL CONSTRUCTION

- 6.1. **Cutting and Assembly** - All garment pieces are to be cut from the same dye-lot of shell material as specified in para. 5.1.1. There shall be no discernible difference in shade between fabric components of the finished garment.
- 6.2. **Stitching** - Sewing shall be lock or lock chain stitch unless otherwise specified. There shall be not less than four or no more than five stitches per centimeter with the beginning and ending of all seams securely backstitched. All raw edges shall be serged. The stitches shall be regular and even, free from skipped stitches or other stitching malfunctions that may result from poor machine tension. Pant side seams shall be stitched, serged and single top-stitched in accordance with ISO4616:1991 serging type#6.01.01 (edge finishing) and seam type #2.02.04. Inseams shall be stitched and serged only.
- 6.3. **Pressing and Shaping** - The pants shall be pressed and shaped in accordance with good commercial practice to conform to the shaping and style of the sealed sample.

7. CONSTRUCTION

- 7.1. **Waistband** - The waistband shall be constructed from a combination of shell material as specified in para 5.1.1 and waist-banding as specified in para 5.1.7. The outside face of the waistband shall have a finished width of no less than 5cm with the inside waist-banding measuring 6cm. The front-left and front-right of waistband above the front pockets shall expand and retract by the use of elastic as specified in para 5.1.10. The waistband shall contain seven (7) 2cm wide belt loops evenly spaced with a functional opening of 6.5cm. The bottom edge of belt loops shall be bar tacked with bar tacks as specified in para 5.1.6. The waistband shall conform in all respects to the drawings and sealed sample.

- 7.2. **Fly Front Opening** - The front of the pants shall close by a means of a military strap button and corresponding buttonhole as specified in para 5.1.5. A button tab containing a button-hole, sized to fit the button as specified in para 5.1.4 shall be sewn to the inside fly with the corresponding button sewn to the inside left front of the waistband lining. The slide fastener, as specified in para 5.1.6 shall be applied to the pants using good commercial practices and shall reflect the sealed sample. The completed waistband and fly front opening shall conform in all respects to the drawings and sealed sample.
- 7.3. **Pockets**
- 7.3.1. **Front Pockets** - There shall be two front pockets constructed from material as specified in para 5.1.1. The pockets shall have slanted openings with the top finishing equal to the front expandable portion of the waistband. All raw edges shall be stitched and serged. The ends of the pockets shall be bar-tacked as shown in the drawings. The completed front pockets shall conform in all respects to the drawings and sealed samples.
- 7.3.2. **Back Pockets** - Two back double welt pockets lined with material specified in para 5.1.1., shall have functional openings of 13.75cm (5 3/8") for male sizes and 13 cm (5 1/8") for female sizes. The pockets shall be bar-tacked at each end of the openings and shall be equipped with a button as specified in para 5.1.4, and a suitably sized buttonhole centered on the pocket opening. The pockets shall conform in all respects to the drawings and sealed sample.
- 7.3.3. **Cargo Pockets (bellows style)** - Shall be constructed from shell material as specified in para 5.1.1 and dimensioned as per the drawings and sealed sample. The bellow style pleated cargo pocket shall come complete with flaps. A 3.8cm (1½") single vertical pleat shall be built into the centre of each the bellow pocket bag. The pocket pleat shall be edge stitched through its full length using a 1.6mm (1/32") gauge. The pockets shall be applied centered on the leg and stitched using a 1.6mm (1/32") gauge so that the bellow is facing towards the back of the pants. The front of both cargo pockets are to be sewn flat to the legs with a bar tack at the top of the openings. One piece of hook tape 15cm x 2.5cm (6" x 1") wide as specified in para 5.1.8 shall be applied to the cargo pocket as shown in the drawings with its corresponding piece of loop tape applied to the flap. The completed cargo pocket shall conform in all respects to the drawings and sealed sample.

- 7.3.4. **Pocket Flaps** - The flaps constructed from shell material as specified in para 5.1.1 shall be dimensioned as per the drawings and sealed sample. All outer edges of the flaps shall be stitched using a 6.3mm (1/4") gauge. The bottom edges of the flaps shall be squared off. A 5cm x 2.5cm (2" x 1") wide piece of loop tape as specified in para 5.1.8 shall be applied to the flap as shown in the drawings. The flaps after being applied to the pants shall be bar tacked on each corner. The flaps shall conform in all respect to the drawings and sealed sample.
- 7.4. **Crotch and Seat Seam** - The crotch and seat seam shall be joined together by stitching the seat seam in a continuous operation from the crotch through to the waistband. All seams shall be serged and stitched using a 401 lockchain stitch. The crotch seam shall be finished so as to allow for easy alterations. A minimum of 4.5cm (1 3/4") alteration room shall be accounted for at the top of the waistband. The finished crotch and seat seam shall conform in all respects to the sealed sample.
- 7.5. **Knee Patches** - Each leg shall be equipped with an outer knee patch constructed from shell material as specified in para 5.1.1. The knee patches shall extend from inseam to outseam and be stitched using a 1.6mm and 6.3mm gauges. The inseam of the trouser leg under the knee patch shall contain a 12cm (4 3/4") opening to allow for the insertion of the neoprene knee pad as specified in para 5.1.11. The finished knee patches, inseam and trouser leg shall conform to the drawing and sealed sample.
- 7.6. **Legs** - The centre front of both legs shall have sewn down permanent creases starting at the crotch level continuing to the hem. They shall be sewn using a 1.6mm (1/32") gauge with no less than 4 stitches per cm.
- 7.7. **Hem** - The bottom hem of both legs shall be serged and left unfinished. The completed legs shall conform in all respects to the drawings and sealed samples.

8. LABELLING

- 8.1. All labeling must be in a bilingual format. The text on all labels shall be of permanent inks of a contrasting colour which shall remain visible and withstand a minimum of 40 washes.

NOTE: A polyurethane adhesive heat transfer label for the Cleaning Instructions is permitted as an alternative to the sewn on label provided they meet the above requirements.

- 8.2. **Identification Labels**
- a. Size Designation (as referenced in the contract documents)
 - b. Fibre Content
 - c. Manufacturers' Name & Contract #
 - d. Material Master Number (reference contract documents)
- 8.3. **Cleaning Instructions**
- a. Machine wash - warm (40°C)
 - b. Do not bleach
 - c. Tumble dry - low
 - d. Do not use Fabric Softeners or Dryer Sheets

9. TECHNICAL INSPECTION

The contractor shall be responsible for the performance of all inspections and tests necessary to demonstrate that the materiel and services being supplied conform to the requirements of this purchase description. This may be accomplished by performing the test specified in this purchase description or by demonstrating to the satisfaction of the CBSA, Technical Authority that conformity to the purchase description and manufacturing process is assured. The contractor may use any independent, ISO 9001 certified and ISO 17025 "Textile" certified testing facilities acceptable to the CBSA Technical Authority. Certification documents will be required.

The CBSA Technical Authority reserves the right to perform any inspection considered necessary to ensure the materials and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered fewer than 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed shall be replaced by others of proper quality at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

10. **DELIVERY, PACKING & MARKING OF CONTAINERS**

It is the responsibility of the manufacturer to ensure that goods are packaged in a suitable manner to be delivered in an undamaged condition. Any goods received in a damaged condition will be returned to the manufacturer for replacement at his full cost.

Packing and marking of shipping containers shall be as specified in the invitation to tender.

A packing slip shall be enclosed showing the contents of each shipment.

The contractor shall also identify clearly on the outside of each package (box) the following items

- Size
- Material Master Number
- Quantity of each size contained in the box
- Contract Number

11. **APPENDICES**

TABLE I - Shell Material Requirements

SCALES OF MEASUREMENTS - Male & Female

DRAWINGS - Appendix

TABLE I - SHELL MATERIAL

	SPECIFICATION	TESTED BY CAN-2-4.2
Colour	Dark Navy Equivalent to the sealed sample	
Weave	2/1 Twill "S"	
Fibre Blend	Polyester 65% ± 3% Cotton 35% ± 3%	
Mass	250g/m ² ± 5% (237.5 – 262.5)	Method 5.1-M90
Width	160 cm (min.)	Method 4.1-M87
Yarns per cm	Warp 37 ± 2 Weft 19 ± 2	Method 6-M89 Method C
Breaking Strength (Grab Method)	Warp 930 Newtons (min.) Weft 650 Newtons (min.)	Method 9.2-M90
Tearing Strength (Single Rip Method)	Warp 40 Newtons ±10 Weft 50 Newtons ±10	Method 12.1-M90
Dimensional Change in Domestic Laundering of Textiles <i>After 1 cycle</i>	Warp 2% (max.) Weft 1% (max.)	Method 58-2004 Washing Procedure I
Colourfastness to Washing <i>Colour Change & Staining Polyester & Cotton</i>	Colour Change - Grey Scale 4 min. Staining Cotton – Grey Scale 3-4 min. Staining Polyester – Grey Scale 2-3 min.	Method 19.1-2004
Colourfastness to Light	At least AATCC L4	Method 18.3-97
Colourfastness to Perspiration <i>Colour Change & Staining Polyester & Cotton</i>	Colour Change - Grey Scale 3 min. Staining – Grey Scale 3 min.	Method 23-M90-2004
Colourfastness to Crocking Wet: Dry:	Wet Staining: Grey scale 3 or better Dry Staining: Grey scale 4 or better	Method 22-2004
Pilling	after 90 mins - no less than 4 after 120 mins - no less than 4	Method 51.2-M87
Abrasion <i>after 5000 cycles</i>	Colour Change - no less than 4 Appearance - no less than 3	ASTM D4966-89
Crease Recovery <i>Face side out</i>	warp - 65% (min.) weft - 70% (min.)	Method 45-M88-2001
Water Repellency (Fabric Face) <i>Initial After 3 washes After 10 washes</i>	100% min. 90% min. 70% min.	Method 26.2-94/ ISO 4920:1981
Absorbency of Textiles (Fabric Back)	50% - 70% min.	Method 26.2-94/ ISO 4920:1981
Free Formaldehyde Content	<75 ppm	Method 63.3-M91
Finish	Flurochemical finish with Water & Stain Protection	

Note: For information purposes, Doubletex (Montreal, Quebec) "TUFF TWILL SD35S H3-OUT" 65/35 Poly/cotton is known to meet this specification. Other Manufacturers' fabrics shall be acceptable provided test data is submitted to verify compliance.

SCALES OF MEASUREMENTS – Pants, Cargo, Male

SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ.	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>SHORT RISE</u>	26	26	66	33	84	69.00	75.00	86.25	25.25	25.75	33.25	20.00	115.00	95
	28	28	71	35	89	74.00	80.00	91.25	25.50	26.00	33.75	20.25	115.25	95
	30	30	76	37	94	79.00	85.00	96.25	25.75	26.25	34.25	20.50	115.50	95
	32	32	81	39	99	84.00	90.00	101.50	26.00	26.50	34.75	20.75	115.75	95
	34	34	86	41	104	89.00	95.00	106.50	26.25	26.75	35.25	21.00	116.00	95
	36	36	91	43	109	94.00	100.00	111.50	26.50	27.00	35.75	21.25	116.25	95
	38	38	96.5	45	114	99.50	105.50	116.75	26.75	27.25	36.25	21.50	116.50	95
	40	40	101.5	47	120	104.50	110.50	121.75	27.00	27.50	36.75	21.75	116.75	95
	42	42	106.5	49	124.5	109.50	115.50	126.75	27.25	27.75	37.25	22.00	117.00	95
	44	44	111.5	51	129.5	114.75	120.75	132.00	27.50	28.00	37.75	22.25	117.25	95
	46	46	116.5	53	134.5	119.75	125.75	137.00	27.75	28.25	38.25	22.50	117.50	95
	48	48	121.5	55	139.5	125.00	131.00	142.00	28.00	28.50	38.75	22.75	117.75	95
	50	50	127	57	144.5	130.00	136.00	147.25	28.25	28.75	39.25	23.00	118.00	95
	52	52	132	59	149.5	135.00	141.00	152.25	28.50	29.00	39.75	23.25	118.25	95
	54	54	137	61	155	140.00	146.00	157.25	28.75	29.25	40.25	23.50	118.50	95
	56	56	142	63	160	145.00	151.00	162.50	29.00	29.50	40.75	23.75	118.75	95
58	58	147	65	165	150.00	156.00	167.50	29.25	29.75	41.25	24.00	119.00	95	
60	60	152	67	170	155.00	161.00	172.50	29.50	30.00	41.75	24.25	119.25	95	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

NOTE: FINISHED GARMENT MEASUREMENTS ARE SHOWN IN CENTEMETERS ONLY.

SCALES OF MEASUREMENTS – Pants, Cargo, Male (Continued)

SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ. Relaxed	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>REGULAR RISE</u>	26	26	66	33	84	69.00	75.00	86.25	25.25	27.75	35.25	24.00	122.00	98
	28	28	71	35	89	74.00	80.00	91.25	25.50	28.00	35.75	24.25	122.25	98
	30	30	76	37	94	79.00	85.00	96.25	25.75	28.25	36.25	24.50	122.50	98
	32	32	81	39	99	84.00	90.00	101.50	26.00	28.50	36.75	24.75	122.75	98
	34	34	86	41	104	89.00	95.00	106.50	26.25	28.75	37.25	25.00	123.00	98
	36	36	91	43	109	94.00	100.00	111.50	26.50	29.00	37.75	25.25	123.25	98
	38	38	96.5	45	114	99.50	105.50	116.75	26.75	29.25	38.25	25.50	123.50	98
	40	40	101.5	47	120	104.50	110.50	121.75	27.00	29.50	38.75	25.75	123.75	98
	42	42	106.5	49	124.5	109.50	115.50	126.75	27.25	29.75	39.25	26.00	124.00	98
	44	44	111.5	51	129.5	114.75	120.75	132.00	27.50	30.00	39.75	26.25	124.25	98
	46	46	116.5	53	134.5	119.75	125.75	137.00	27.75	30.25	40.25	26.50	124.50	98
	48	48	121.5	55	139.5	125.00	131.00	142.00	28.00	30.50	40.75	26.75	124.75	98
	50	50	127	57	144.5	130.00	136.00	147.25	28.25	30.75	41.25	27.00	125.00	98
	52	52	132	59	149.5	135.00	141.00	152.25	28.50	31.00	41.75	27.25	125.25	98
	54	54	137	61	155	140.00	146.00	157.25	28.75	31.25	42.25	27.50	125.50	98
	56	56	142	63	160	145.00	151.00	162.50	29.00	31.50	42.75	27.75	125.75	98
58	58	147	65	165	150.00	156.00	167.50	29.25	31.75	43.25	28.00	126.00	98	
60	60	152	67	170	155.00	161.00	172.50	29.50	32.00	43.75	28.25	126.25	98	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

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SCALES OF MEASUREMENTS – Pants, Cargo, Male (Continued)

SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ.	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>TALL RISE</u>	26	26	66	33	84	69.00	75.00	86.25	25.25	29.75	37.25	26.75	127.75	101
	28	28	71	35	89	74.00	80.00	91.25	25.50	30.00	37.75	27.00	128.00	101
	30	30	76	37	94	79.00	85.00	96.25	25.75	30.25	38.25	27.25	128.25	101
	32	32	81	39	99	84.00	90.00	101.50	26.00	30.50	38.75	27.50	128.50	101
	34	34	86	41	104	89.00	95.00	106.50	26.25	30.75	39.25	27.75	128.75	101
	36	36	91	43	109	94.00	100.00	111.50	26.50	31.00	39.75	28.00	129.00	101
	38	38	96.5	45	114	99.50	105.50	116.75	26.75	31.25	40.25	28.25	129.25	101
	40	40	101.5	47	120	104.50	110.50	121.75	27.00	31.50	40.75	28.50	129.50	101
	42	42	106.5	49	124.5	109.50	115.50	126.75	27.25	31.75	41.25	28.75	129.75	101
	44	44	111.5	51	129.5	114.75	120.75	132.00	27.50	32.00	41.75	29.00	130.00	101
	46	46	116.5	53	134.5	119.75	125.75	137.00	27.75	32.25	42.25	29.25	130.25	101
	48	48	121.5	55	139.5	125.00	131.00	142.00	28.00	32.50	42.75	29.50	130.50	101
	50	50	127	57	144.5	130.00	136.00	147.25	28.25	32.75	43.25	29.75	130.75	101
	52	52	132	59	149.5	135.00	141.00	152.25	28.50	33.00	43.75	30.00	131.00	101
	54	54	137	61	155	140.00	146.00	157.25	28.75	33.25	44.25	30.25	131.25	101
	56	56	142	63	160	145.00	151.00	162.50	29.00	33.50	44.75	30.50	131.50	101
58	58	147	65	165	150.00	156.00	167.50	29.25	33.75	45.25	30.75	131.75	101	
60	60	152	67	170	155.00	161.00	172.50	29.50	34.00	45.75	31.00	132.00	101	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

NOTE: FINISHED GARMENT MEASUREMENTS ARE SHOWN IN CENTEMETERS ONLY.

SCALES OF MEASUREMENTS – Pants, Cargo, Female

SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ.	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>SHORT RISE</u>	24	24	61	31	78.5	64.00	70.00	81.00	23.25	25.00	32.00	19.00	109.00	90
	26	26	66	33	84	69.00	75.00	86.00	23.50	25.25	32.25	19.25	109.25	90
	28	28	71	35	89	74.00	80.00	91.00	23.75	25.50	32.50	19.50	109.50	90
	30	30	76	37	94	79.00	85.00	96.00	24.00	25.75	32.75	19.75	109.75	90
	32	32	81	39	99	84.00	90.00	101.50	24.25	26.00	33.00	20.00	110.00	90
	34	34	86	41	104	89.00	95.00	106.50	24.50	26.25	33.25	20.25	110.25	90
	36	36	91	43	109	94.00	100.00	111.50	24.75	26.50	33.50	20.50	110.50	90
	38	38	96.5	45	114	99.50	105.50	116.75	25.00	26.75	33.75	20.75	110.75	90
	40	40	101.5	47	120	104.50	110.50	121.75	25.25	27.00	34.00	21.00	111.00	90
	42	42	106.5	49	124.5	109.50	115.50	127.00	25.50	27.25	34.25	21.25	111.25	90
	44	44	111.5	51	129.5	114.75	120.75	132.00	25.75	27.50	34.50	21.50	111.50	90
	46	46	116.5	53	134.5	119.75	125.75	137.00	26.00	27.75	34.75	21.75	111.75	90
	48	48	121.5	55	139.5	125.00	131.00	142.00	26.25	28.00	35.00	22.00	112.00	90
	50	50	127	57	144.5	130.00	136.00	147.00	26.50	28.25	35.25	22.25	112.25	90
	52	52	132	59	149.5	135.00	141.00	152.00	26.75	28.50	35.50	22.50	112.50	90
	54	54	137	61	155	140.00	146.00	157.00	27.00	28.75	35.75	22.75	112.75	90
56	56	142	63	160	145.00	151.00	162.50	27.25	29.00	36.00	23.00	113.00	90	
58	58	147	65	165	150.00	156.00	167.50	27.50	29.25	36.25	23.25	113.25	90	
60	60	152	67	170	155.00	161.00	172.50	27.75	29.50	36.50	23.50	113.50	90	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

NOTE: FINISHED GARMENT MEASUREMENTS ARE SHOWN IN CENTEMETERS ONLY.

SCALES OF MEASUREMENTS – Pants, Cargo, Female (Continued)

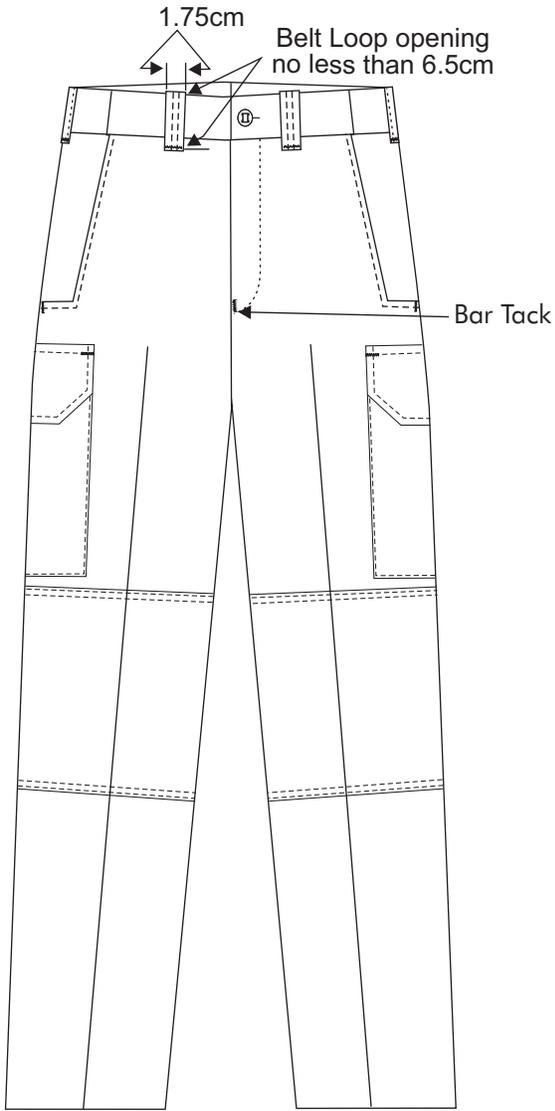
SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ.	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>REGULAR RISE</u>	24	24	61	31	78.5	64.00	70.00	81.00	23.25	27.00	34.00	21.00	114.00	93
	26	26	66	33	84	69.00	75.00	86.00	23.50	27.25	34.25	21.25	114.25	93
	28	28	71	35	89	74.00	80.00	91.00	23.75	27.50	34.50	21.50	114.50	93
	30	30	76	37	94	79.00	85.00	96.00	24.00	27.75	34.75	21.75	114.75	93
	32	32	81	39	99	84.00	90.00	101.50	24.25	28.00	35.00	22.00	115.00	93
	34	34	86	41	104	89.00	95.00	106.50	24.50	28.25	35.25	22.25	115.25	93
	36	36	91	43	109	94.00	100.00	111.50	24.75	28.50	35.50	22.50	115.50	93
	38	38	96.5	45	114	99.50	105.50	116.75	25.00	28.75	35.75	22.75	115.75	93
	40	40	101.5	47	120	104.50	110.50	121.75	25.25	29.00	36.00	23.00	116.00	93
	42	42	106.5	49	124.5	109.50	115.50	127.00	25.50	29.25	36.25	23.25	116.25	93
	44	44	111.5	51	129.5	114.75	120.75	132.00	25.75	29.50	36.50	23.50	116.50	93
	46	46	116.5	53	134.5	119.75	125.75	137.00	26.00	29.75	36.75	23.75	116.75	93
	48	48	121.5	55	139.5	125.00	131.00	142.00	26.25	30.00	37.00	24.00	117.00	93
	50	50	127	57	144.5	130.00	136.00	147.00	26.50	30.25	37.25	24.25	117.25	93
	52	52	132	59	149.5	135.00	141.00	152.00	26.75	30.50	37.50	24.50	117.50	93
	54	54	137	61	155	140.00	146.00	157.00	27.00	30.75	37.75	24.75	117.75	93
56	56	142	63	160	145.00	151.00	162.50	27.25	31.00	38.00	25.00	118.00	93	
58	58	147	65	165	150.00	156.00	167.50	27.50	31.25	38.25	25.25	118.25	93	
60	60	152	67	170	155.00	161.00	172.50	27.75	31.50	38.50	25.50	118.50	93	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

NOTE: FINISHED GARMENT MEASUREMENTS ARE SHOWN IN CENTEMETERS ONLY.

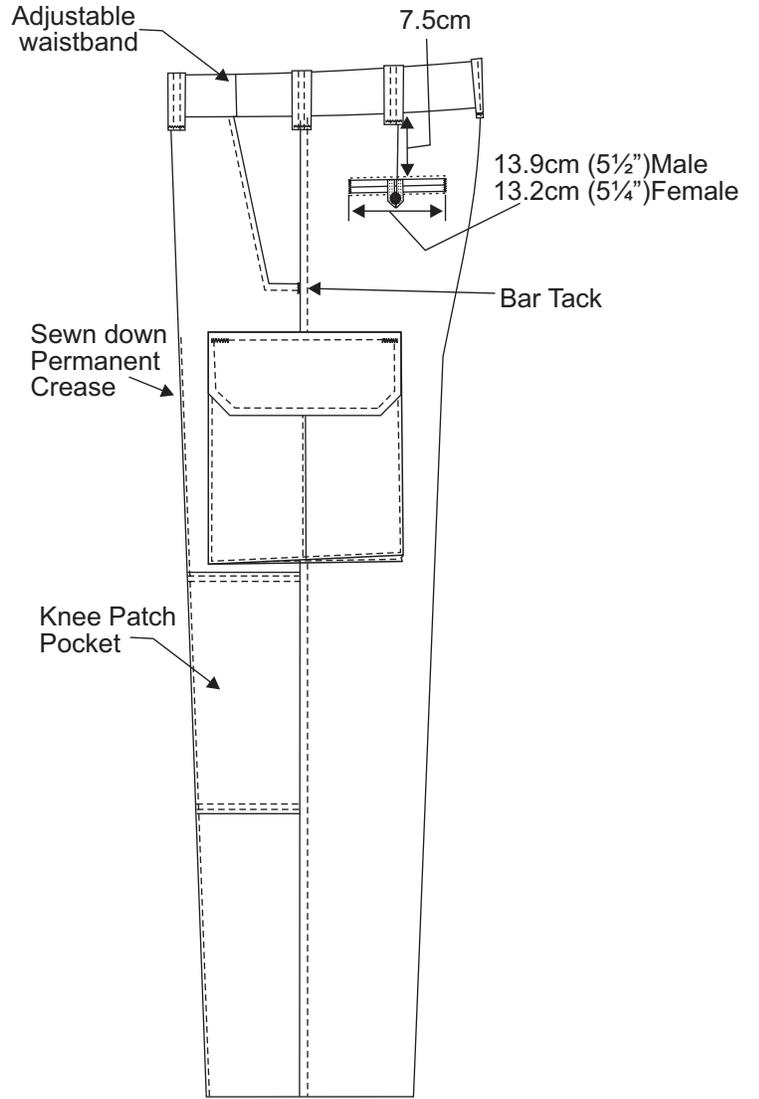
SCALES OF MEASUREMENTS – Pants, Cargo, Female (Continued)

SIZE DESIGNATION		BODY MEASUREMENTS				FINISHED GARMENT MEASUREMENTS								
RISE	SIZE	WAIST		SEAT		Waistband Circ.	Waistband Circ. Stretched	Seat Circ.	Bottom (½ only)	Front Rise	Back Rise	Crotch Depth (outseam minus inseam)	Outseam (bottom of waistband to hem)	Inseam
		Inches	cm	Inches	cm									
<u>TALL RISE</u>	24	24	61	31	78.5	64.00	70.00	81.00	23.25	29.00	36.00	23.00	119.00	96
	26	26	66	33	84	69.00	75.00	86.00	23.50	29.25	36.25	23.25	119.25	96
	28	28	71	35	89	74.00	80.00	91.00	23.75	29.50	36.50	23.50	119.50	96
	30	30	76	37	94	79.00	85.00	96.00	24.00	29.75	36.75	23.75	119.75	96
	32	32	81	39	99	84.00	90.00	101.50	24.25	30.00	37.00	24.00	120.00	96
	34	34	86	41	104	89.00	95.00	106.50	24.50	30.25	37.25	24.25	120.25	96
	36	36	91	43	109	94.00	100.00	111.50	24.75	30.50	37.50	24.50	120.50	96
	38	38	96.5	45	114	99.50	105.50	116.75	25.00	30.75	37.75	24.75	120.75	96
	40	40	101.5	47	120	104.50	110.50	121.75	25.25	31.00	38.00	25.00	121.00	96
	42	42	106.5	49	124.5	109.50	115.50	127.00	25.50	31.25	38.25	25.25	121.25	96
	44	44	111.5	51	129.5	114.75	120.75	132.00	25.75	31.50	38.50	25.50	121.50	96
	46	46	116.5	53	134.5	119.75	125.75	137.00	26.00	31.75	38.75	25.75	121.75	96
	48	48	121.5	55	139.5	125.00	131.00	142.00	26.25	32.00	39.00	26.00	122.00	96
	50	50	127	57	144.5	130.00	136.00	147.00	26.50	32.25	39.25	26.25	122.25	96
	52	52	132	59	149.5	135.00	141.00	152.00	26.75	32.50	39.50	26.50	122.50	96
	54	54	137	61	155	140.00	146.00	157.00	27.00	32.75	39.75	26.75	122.75	96
	56	56	142	63	160	145.00	151.00	162.50	27.25	33.00	40.00	27.00	123.00	96
58	58	147	65	165	150.00	156.00	167.50	27.50	33.25	40.25	27.25	123.25	96	
60	60	152	67	170	155.00	161.00	172.50	27.75	33.50	40.50	27.50	123.50	96	
TOLERANCE ±						1.5cm	1.5cm	1.5cm	1cm	1cm	1cm	1cm	1.5cm	1.5cm
MEASUREMENT LOCATION						A	B	C	D	E	F		G	H

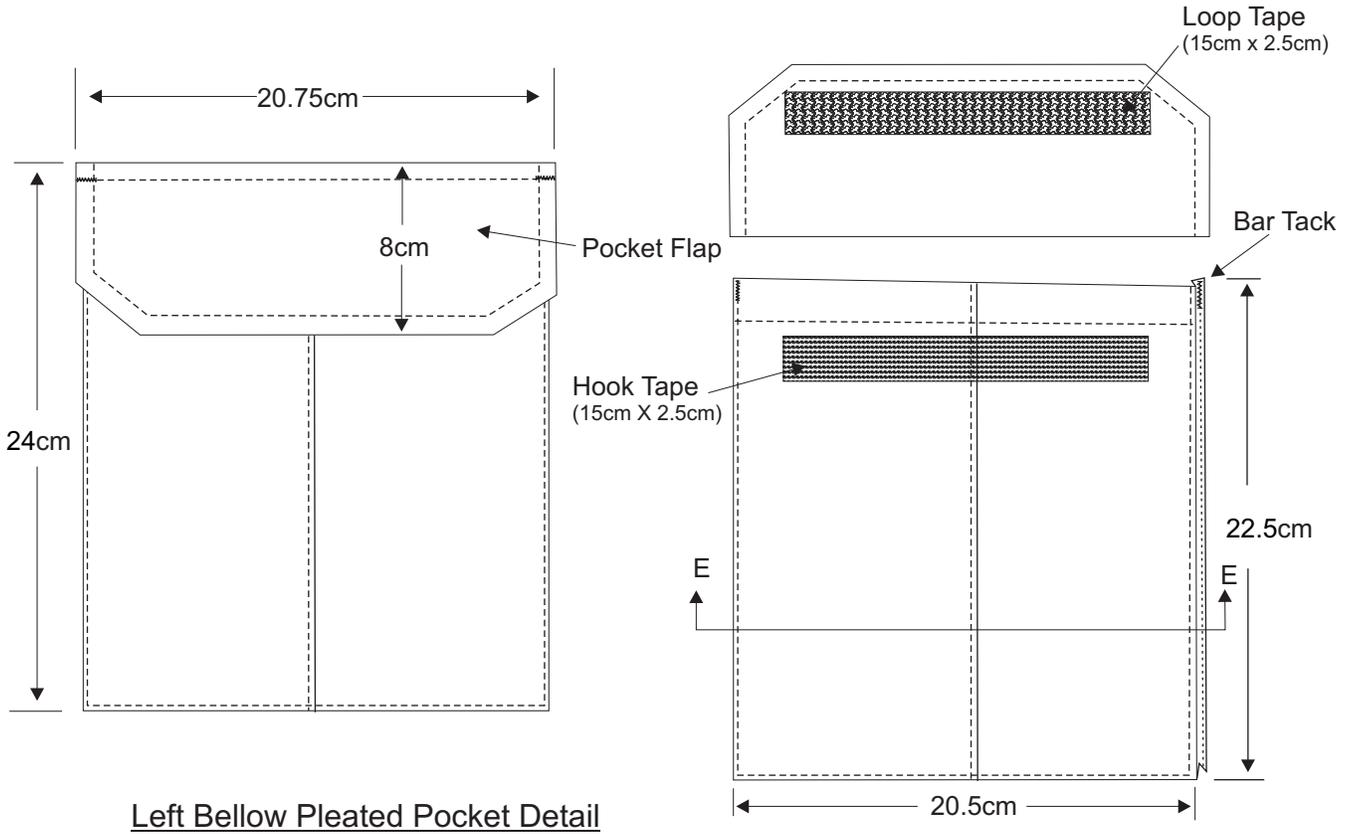
NOTE: FINISHED GARMENT MEASUREMENTS ARE SHOWN IN CENTEMETERS ONLY.



Front View

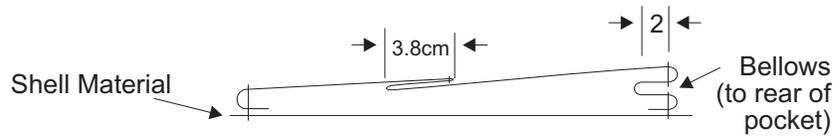


Side View



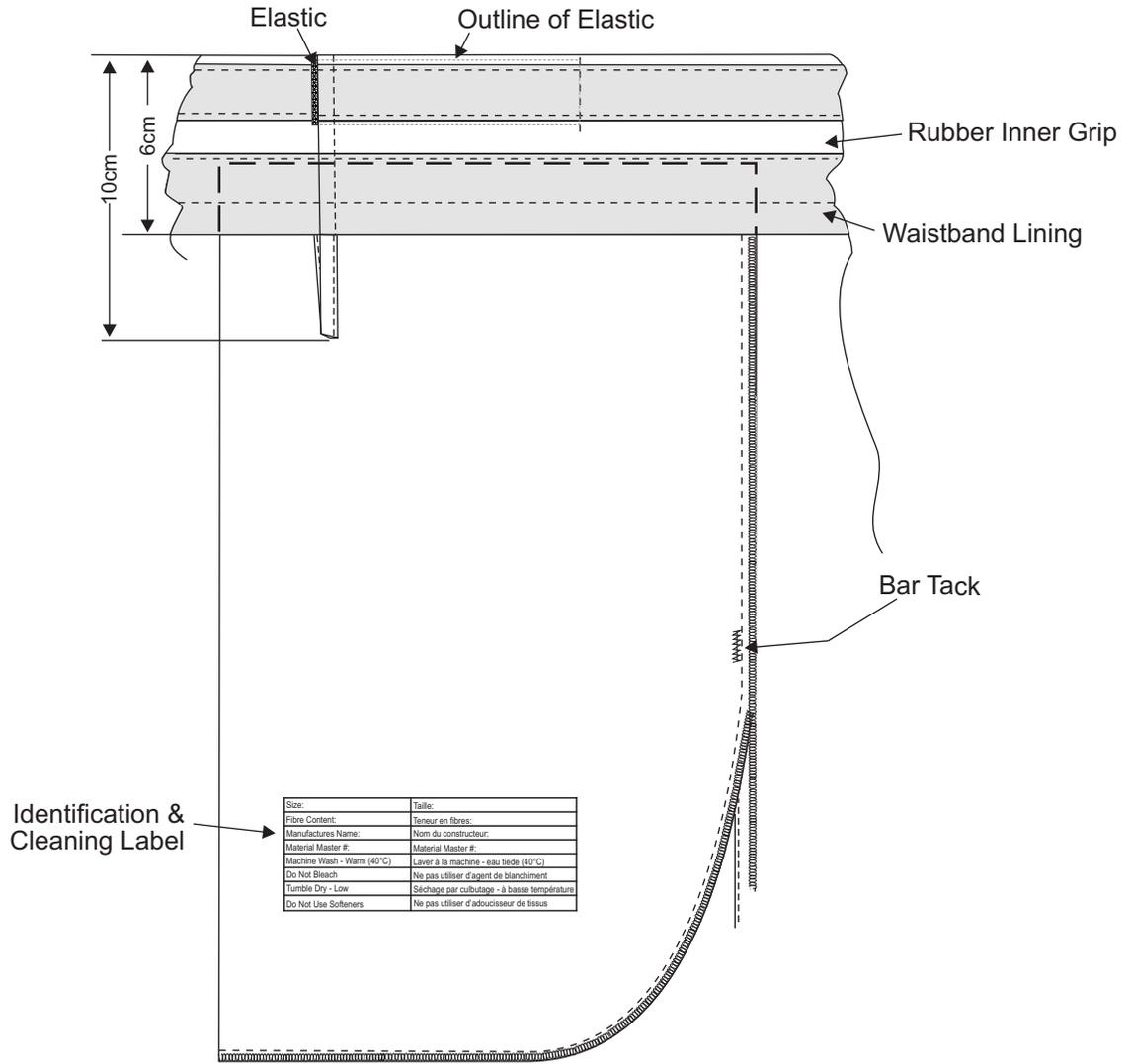
Left Bellow Pleated Pocket Detail

Left Pleated Bellow Pocket shown with flap open

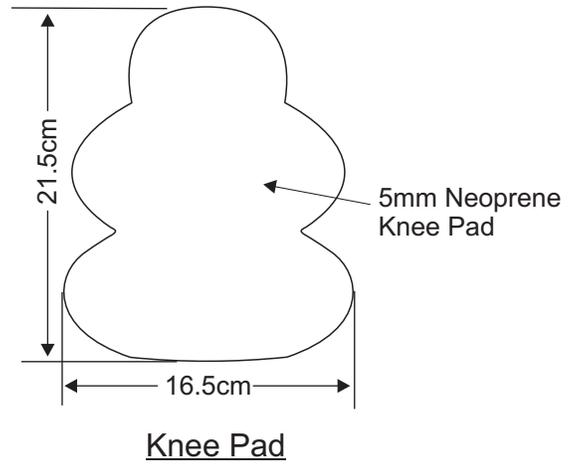
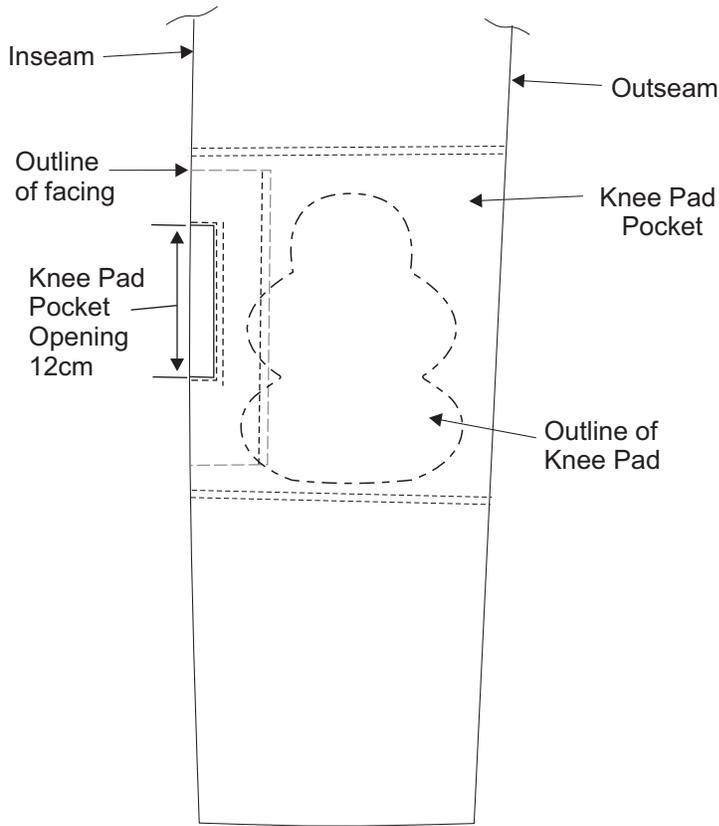


Section E-E
Left Pleated Bellow Pocket & Trouser leg

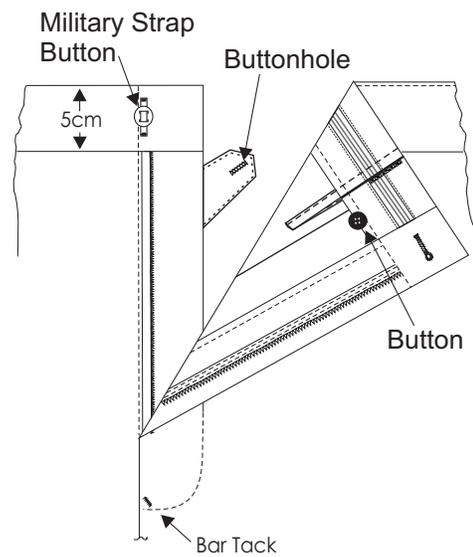
All Measurements in Centimeters
NOT TO SCALE



Front Pocket & Adjustable Waistband Detail



Knee Pad Pocket Detail
 (Trousler leg shown inside out)



Fly Detail