PRIVATE SPECIFICATION

Prepared for the

Tshwane Metropolitan Police Department

BODY PROTECTION SYSTEM, RIOT GEAR

TMP 318
Version 01.0/July 2018

1. Scope

This specification covers the material, general design and performance requirements for body protection systems to serve as riot gear for members of the Tshwane Metropolitan Police Department.

NOTE: ***All components shall be manufactured in the Republic of South Africa. In instances where the raw material and/or finished components are not available in the Republic of South Africa, the onus shall be on the bidder to apply for exemption certificates from the Department of Trade and Industry. Attention is drawn to Annex A.***

2. Definitions

For the purpose of this specification the following definitions shall apply:

Acceptable: Acceptable to the Tshwane Metropolitan Police Department
Nominal: Subject to the tolerances normal to good manufacturing practice
SANS: South African National Standard
TMPD: Tshwane Metropolitan Police Department

3. Product overview

Each body protection system shall consist of the components as given in table 1 which shall be worn together as an ensemble and be fully compatible with each other.

Table 1 – Components of body protection system

1 List of items	2 Item description
Jacket	Jacket, Body Protection System, W/Shoulder padding, One size Fits All
Arms shield, Left	Pad, Arm, Body Protection System, One Size Fits All
Arm shield, Right	
Leg shield, Left	Pad, Leg, Body Protection System
Leg shield, Right	
Radio pouch	Pouch, Body Protection System
Left lower front pouch	
Right lower front pouch	
Face mask back pouch	

4. Digital images

The body protection system depicted in the images in this private specification is an example of a suitable type, but not limited to what will be deemed as acceptable.

Figure 1 – Example of typical jacket

Figure 2 – Example of typical arm protection shield

Figure 3 - Example of typical leg protection shield

Figure 4 - Example of typical detachable pockets

5. Client Furnished Materials

No materials will be supplied by the Tshwane Metropolitan Police Department.

6. Component requirements

6.1 General

- all materials used for the manufacture of the body protection system shall be non-toxic and non-irritant

6.2 Jacket outer material

- made from inherent flame retardant synthetic fibres
- to consist of 93% meta-aramid fibre, 5 % para-aramid fibres and 2% electrostatic charge dissipative fibres
- nominal finished mass of 260 g/m^2 when tested in accordance with ISO 3801 “Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area”
- examples of suitable outer materials are Nomex® Comfort[1] and Kermel®[1]
- to comply with the relevant requirements for performance class C, Category 1 of SANS 1423-1 “Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics”
- colour to be black
- have a minimum colour fastness rating of 5 to light when tested in accordance with SANS 105-B02/ISO 105-B02 “Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test”
- have a minimum colour fastness rating of 4 to perspiration when tested in accordance with SANS 105-E04/ISO 105-E04, “Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration”
- have a minimum colour fastness rating of 4 to water when tested in accordance with SANS 105-E01/ISO 105-E01, “Textiles – Tests for colour fastness – Part E01: Colour fastness to water”
- have a water repellent finish

6.3 Protective pad lining fabric

- to be an acceptable breathable synthetic fabric with a moisture management system with a soft handle and anti-microbial finish

[1] These trade names are given for the convenience of users of this private specification and do not constitute an endorsement by TMPD of the products named. Equivalent products may be used if they can be shown to lead to the same results.

- have a minimum colour fastness rating of 4 to light when tested in accordance with SANS 105-B02/ISO 105-B02 “Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test”
- have a minimum colour fastness rating of 4 to perspiration when tested in accordance with SANS 105-E04/ISO 105-E04, “Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration”
- have a minimum colour fastness rating of 4 to water when tested in accordance with SANS 105-E01/ISO 105-E01, “Textiles – Tests for colour fastness – Part E01: Colour fastness to water”
- colour to be black

6.4 Moulded protection sectional units

- acceptable reinforced material that can be moulded and able to withstand excessive force
- the mechanical properties of the material used shall exceed the requirements given in table 2

Table 2 – Performance requirement of moulded protection sectional units

1	2	3
Property	**Requirement**	**Test method**
Tensile strength, MPa, min.	12	ISO 6892-1
Elongation, %, min.	400	ISO 6892-1

6.5 Elastic webbing

- to comply with the requirements for type 1 of SANS 142 “Narrow elastic fabrics and strips”
- colour to be black
- has an expansion capability of at least 80%

6.6 Touch and close fastener

- to comply with the requirements of SANS 1823 “Touch and close fasteners”
- colour to be black
- various widths
- flammability requirements to comply with performance class C, Category 1 of SANS 1423-1 “Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics”

6.7 Slide fasteners

- to comply with the requirements for performance class C fasteners of SANS 1822 “Slide fasteners”
- two-way open end
- elements to be of brass
- colour to be black

6.8 Binding

- acceptable webbing
- width to be such that it is fit for purpose
- to be able to withstand the same washing and drying procedures as specified for the outer material
- colour to be black

6.9 Foam

- to be acceptable closed cell foam
- density and thickness to be such as to be fit for purpose

6.10 Coated PVC material

- to be an acceptable fire retardant coated PVC material with appropriate backing cloth that shall not tear, crack or become brittle with ageing
- colour to be black

6.11 Metal components

6.11.1 General (applicable to all metal components)

- all metal components shall be electroplated to prevent corrosion
- to be smooth and free from burrs and sharp edges
- such that it shall neatly accommodate the webbing with which it is used (as relevant)

6.11.2 Rivets

- acceptable heavy duty metal rivets

6.11.3 Press studs

- acceptable heavy duty metal press studs of the male and female type

6.11.4 D-rings and spring clips

- acceptable D-rings and spring clips suitable for use on gloves
- spring clips of nominal length 25 – 30 mm

6.12 Webbing

- to comply with the requirements as given in table 3
- colour to be black
- to comply with the relevant requirements for performance class C, Category 1 of SANS 1423-1 “Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics

Table 3 – Webbing requirements

1	2	3
Property	**Requirement**	**SANS number** (unless otherwise indicated)
Composition, %	All continuous filament polyester	AATCC 20
Thickness, mm	1.0 ± 0.1	Physical analysis
Selvedge	Lockstitch	
Width, mm	20, 25, 35, 50	5488

6.13 Moulded plastics adjustment fittings/buckles

- made from virgin plastics
- not to become brittle with age and to outlast the garment
- such that it shall neatly accommodate the adjustment straps with which it is used
- colour to be black

6.14 Jacket and pouch lining material

- to be an acceptable black polyester rip-stop lining fabric with a water repellent finish and high abrasion resistance
- have a minimum colour fastness rating of 4 to light when tested in accordance with SANS 105-B02/ISO 105-B02 “Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test”
- have a minimum colour fastness rating of 4 to perspiration when tested in accordance with SANS 105-E04/ISO 105-E04, “Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration”
- have a minimum colour fastness rating of 4 to water when tested in accordance with SANS 105-E01/ISO 105-E01, “Textiles – Tests for colour fastness – Part E01: Colour fastness to water”

6.15 Mesh lining fabric

- an acceptable polyester air mesh type material with a soft handle
- mass to be such as to be fit for purpose
- have approximately 46 holes per 2 cm^2 (given for guidance)
- to comply with the same colour fastness requirements as specified for the jacket lining (see 6.14)
- colour to be black

6.16 Threads

6.16.1 General

- to comply with relevant requirements of SANS 1362 “Sewing threads”
- colour to be black, ticket number to be fit for purpose

6.16.2 Sewing thread for jacket, protective pads and pouches

- continuous filament thread, 100% Aramid fibres

7. Workmanship

The body protection system shall be:

- made with first-class workmanship throughout
- of uniform and acceptable make, colour and finish

The body protection system shall be free from:

- defects, that affect their appearance or may affect their serviceability (or both)
- cracking
- marks, spots and stains incurred in the making-up

Seams and stitches shall be:

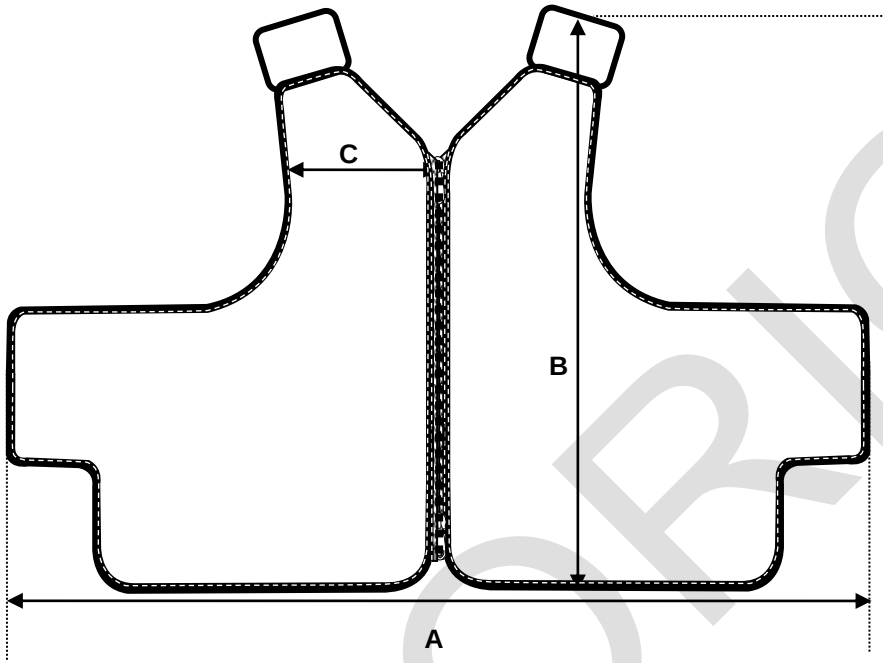
- smooth and uniform
- free from twists, pleats and puckers
- sufficiently extensible to avoid seam cracking and undue shrinkage in use

Ends of sewing shall be:

- trimmed and loose threads removed
- back-tacked if unsecured (at least 5 mm)

8. Sizes and dimensions

- the jackets shall be supplied in one size that shall be adjustable to fit all sizes as required by TMPD
  - approximate finished measurements of the front panels shall be as given in figure 5
  - approximate finished measurements of the back panel shall be as given in figure 6
- the protective arm shields shall be supplied in one size to fit all
- the protective leg shields shall be supplied in sizes Small to X-Large as specified in the order or contract



Measuring point	Description	Nominal finished measurement in cm
Front panel width: **A**	Measure across the width from the one side edge to the other	72 cm
Front length: **B**	Measure in a straight line from the centre point at the shoulder to the bottom hem of the jacket	64 cm
½ front chest width: **C**	Measure across the half front chest at approximately the top edge of the slide fastener	17 cm

Figure 5 – Nominal finished outer dimensions of the jacket fronts

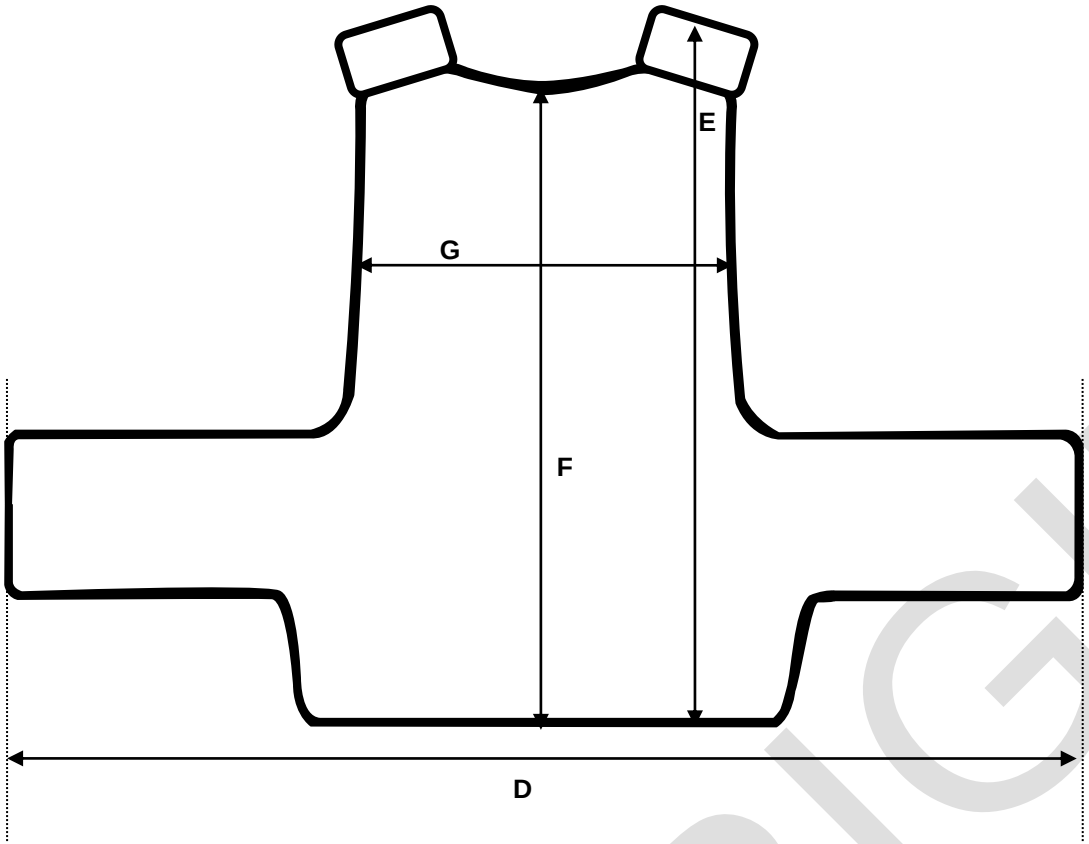


Figure 6 – Nominal finished outer dimensions of the back jacket

Measuring point	Description	Nominal finished measurement in cm
Back panel width: **D**	Measure across the width from the one side edge to the other	84 cm
Back length: **E**	Measure in a straight line from the centre point at the shoulder to the bottom hem of the jacket	68 cm
Centre back length: **F**	Measure in a straight line from the centre back neck point to the bottom hem of the jacket	57 cm
Upper back width: **G**	Measure across the back width approximately in the centre of the back armhole	32 cm

9. Design requirements

9.1 General

- the body protection system shall be of such a design that it shall provide the maximum protection and comfort for men and women
- to be such that the full ensemble shall comply with the performance requirements as specified in section 14
- each body protection system shall consist of the following main components
  - jacket (see section 10)
  - four detachable pouches (see section11)
  - two arm protection shields (see section 12)
  - two leg protection shields (see section 13)

Figure 7 – Identification of main components of body protection system (image is only an example of a suitable system)

10. Jacket

10.1 General

- each jacket shall consist of the following main elements
  - two front panels (see 10.2)
  - one back panel (see 10.3)
  - two shoulder panels with laid-on moulded protective sectional units that shall function as impact absorption buffers (see 10.4)
  - the outer edges of the front panels, back panels and shoulder panels shall be bound with binding
- be adjustable and supplied in one size
- have a front slide fastener closure
- front panels and back panel shall be attached to the shoulder panel in such a way that the bottom edges of the shoulder panels shall overlap the shoulder edges of the front and back panel respectively
  - to be properly secured with stitching as well as bar-tacks

Figure 8 – Identification of jacket panels (image to serve as an example only)

10.2 Front panels of jacket

10.2.1 Each outside front panel shall be:

- made from jacket outer material as specified in 6.2
- such that side edges are not sewn to the back panel side edges
- such that side edges are cut with extensions to facilitate adjustment
- fitted with a stinger of a slide fastener (see 6.7)
  - positioned behind the bound front edges of each front
  - sewn down with two rows of stitchings along the front edge
  - to extend from the gorge seam to the bottom edge of the jacket
  - be vertically bar-tacked at the top and bottom edges of the stringer
- fitted with at least four horizontal lengths of webbing
  - laid on top of outer material layer
  - to extend from the front edges to the outer side edges
  - raw edges to be covered by the binding along the outer edges of the jacket
  - attached to the fronts by means of several vertical bar-tacks along the full length of each strip
    - bar-tacks to be spaced at appropriate intervals as to neatly accommodate the fastening mechanisms on the back of all the relevant pouches (see section 11)
    - bar-tacks to extend along the full depth of the webbing strips
  - appropriately spaced to acceptably accommodate the pouch attachment

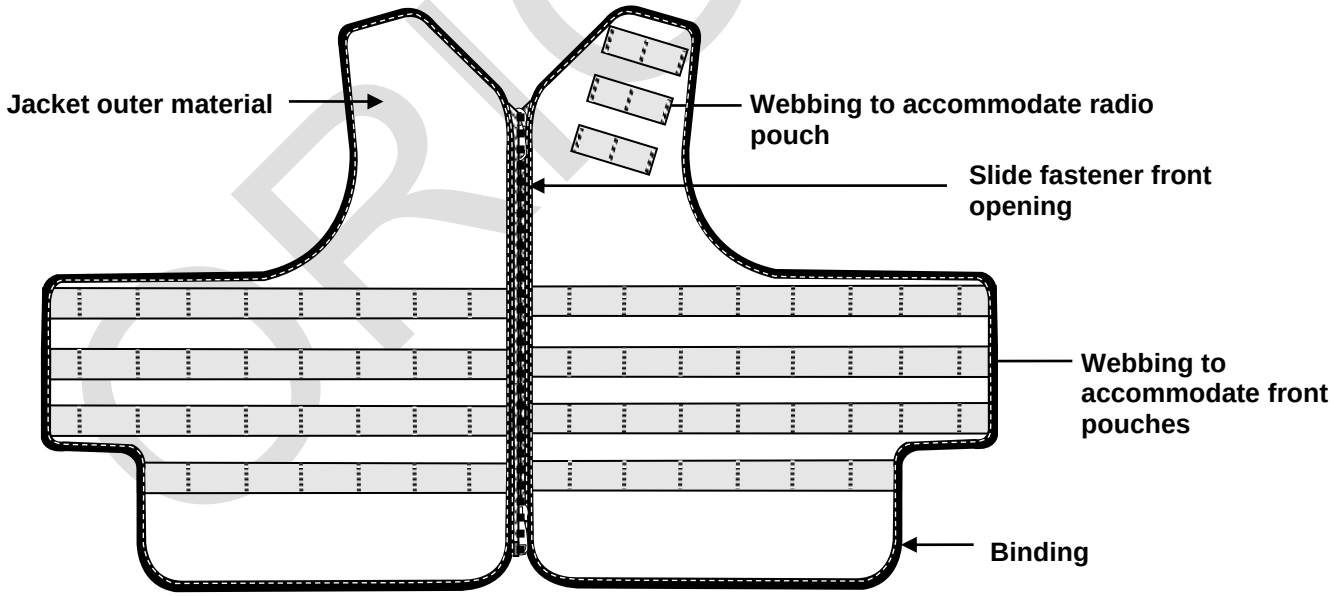


Figure 9 – Compulsory design elements on the front panels

10.2.2 Each left outside front shall be:

- fitted with three additional lengths of webbing
  - laid on top of outer material layer
  - of finished length and positioned in such a way that it shall neatly accommodate the attachment straps of the radio pouch (see 11.2)
  - cut edges to be heat-sealed
  - each strip shall be secured with bar-tacks
  - positioned in the upper chest area

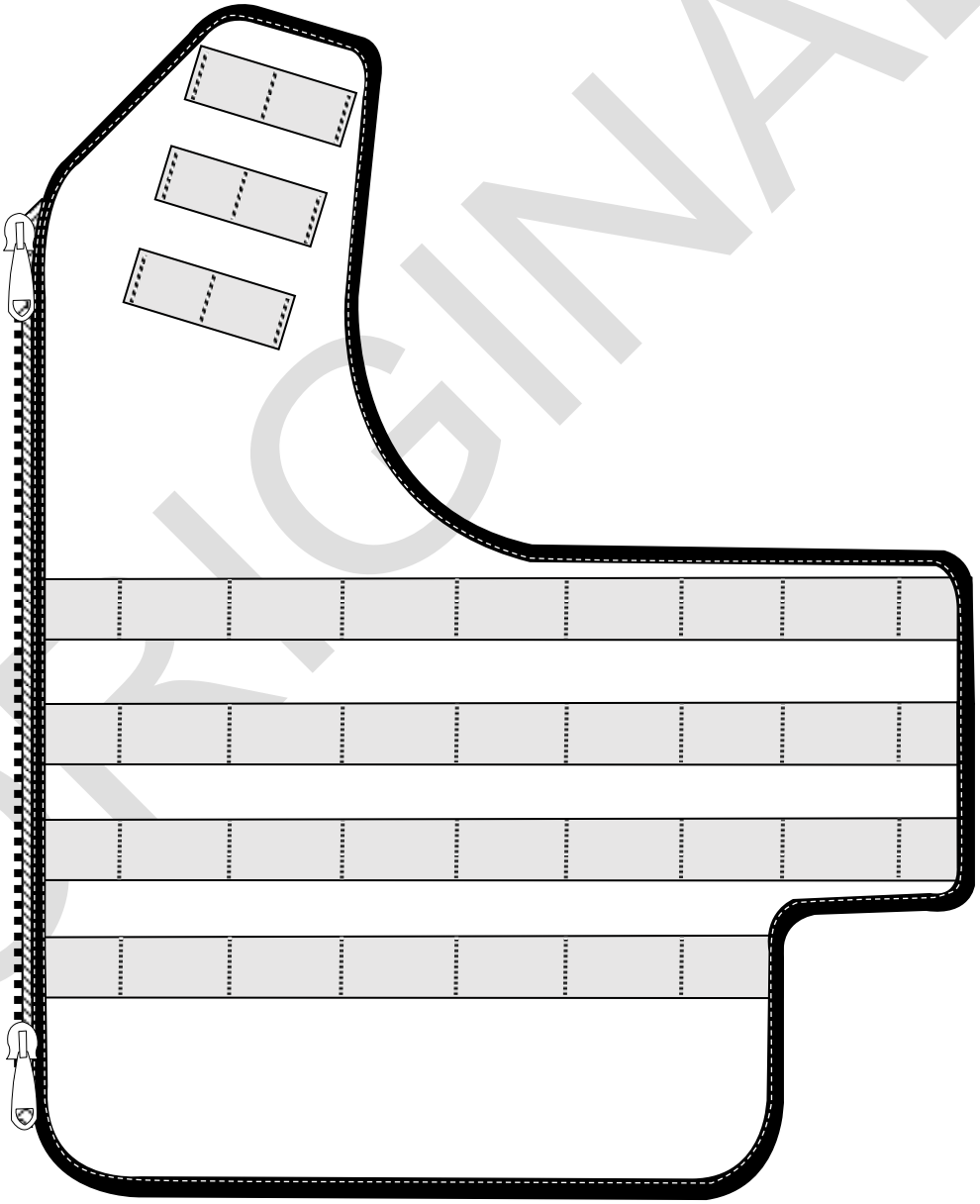


Figure 10 – Example of typical face side of left front panel

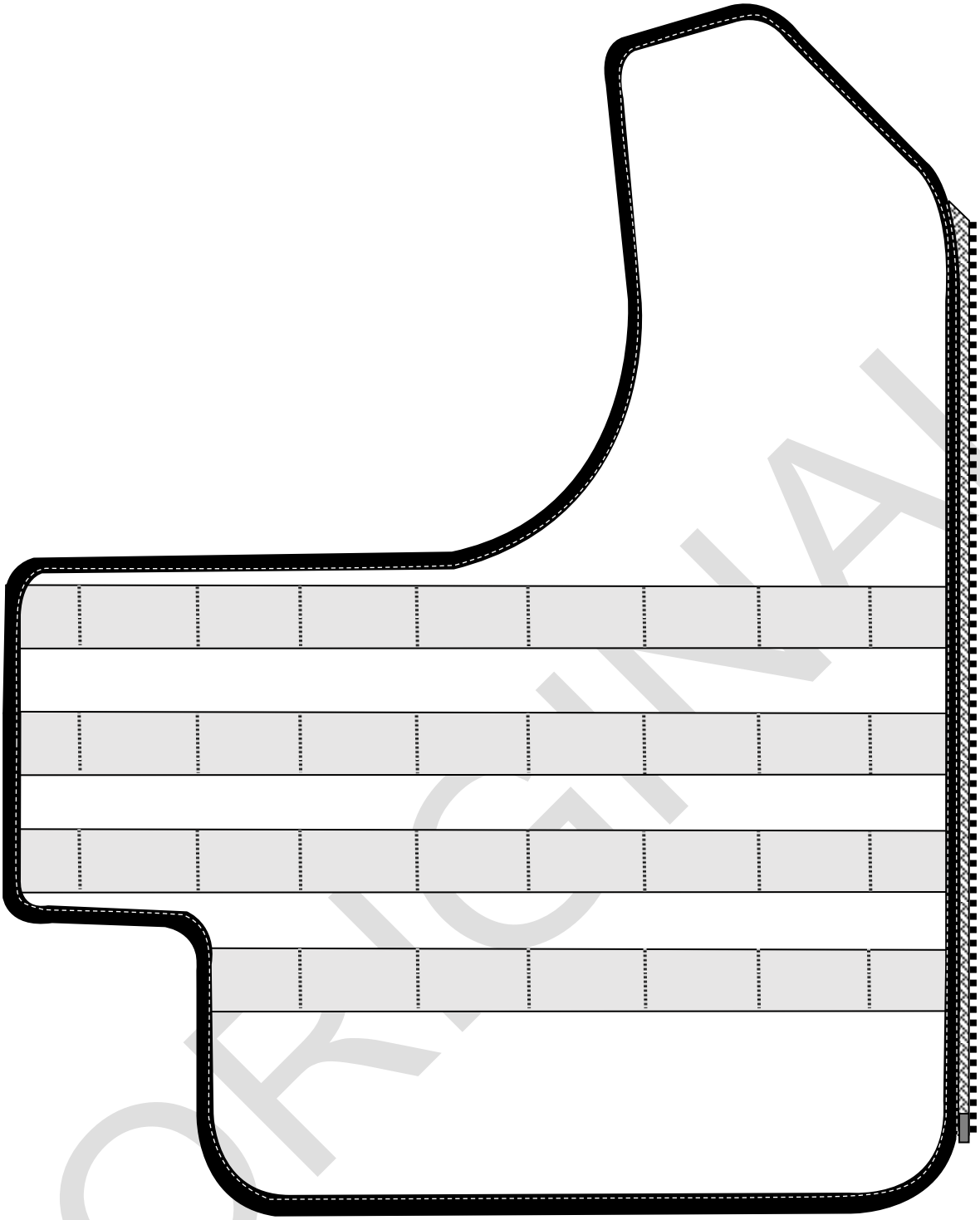


Figure 11 – Example of typical face side of right front panel

10.2.3 Each inside front panel shall be:

- lined with jacket lining material as given in 6.14
- fitted with a belt retaining loop (to keep integrated waist belt on back panel in position)
  - of webbing
  - positioned and of such length as to neatly accommodate the adjustable waist belt
  - cut ends to be heat-sealed to prevent fraying
  - properly secured
- fitted with touch and close fastener on the inside to facility adjustment

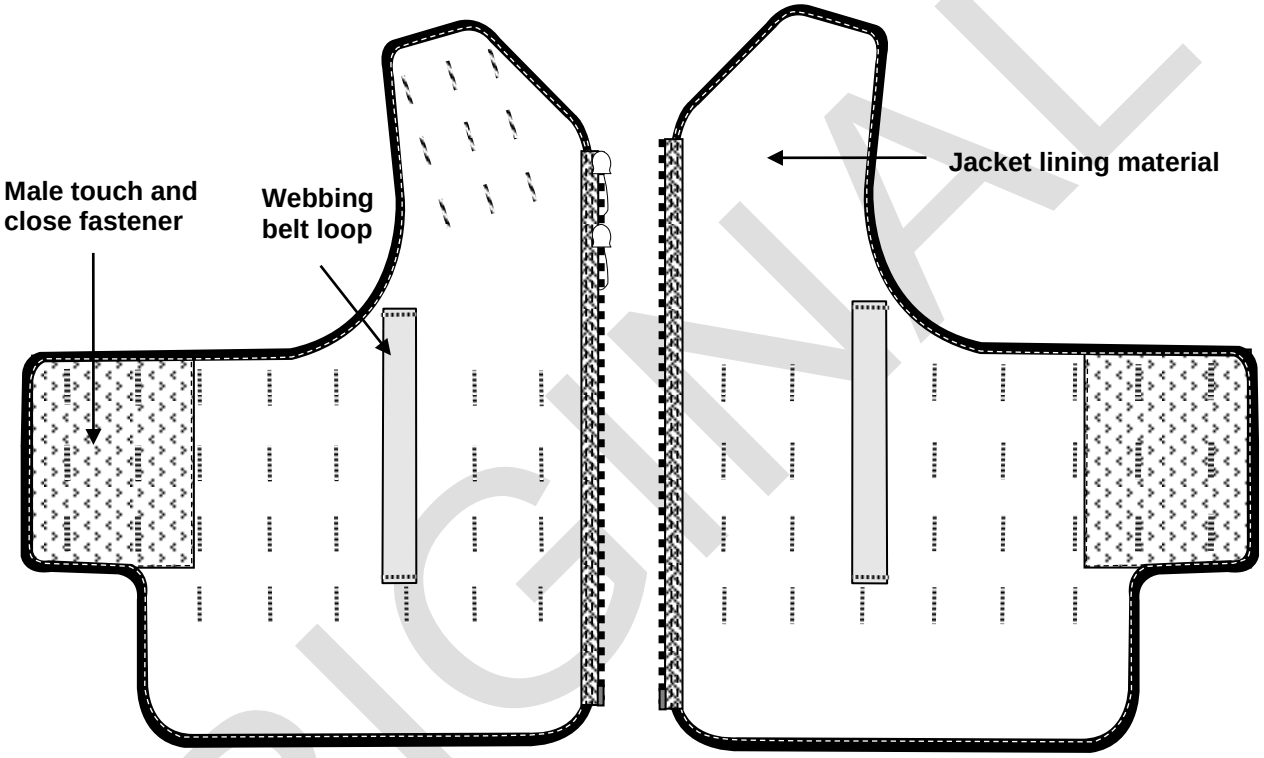


Figure 12 – Example of typical inside view of front panels

10.3 Back panel of jacket

10.3.1 The face side of the back panel shall be:

- made from jacket outer material as specified in 6.2
- such that side edges are cut with extensions to facilitate adjustment
- fitted with a length of webbing on the upper back
  - laid on top of outer material layer and to serve as reinforcement for the extraction strap on the inside of the back panel
- fitted with touch and close fastener patches
  - in corresponding positions to the fastener on the front side panels
- fitted with at least four horizontal lengths of webbing which shall be bar-tacked
  - bar-tacks to be spaced at appropriate intervals as to neatly accommodate the fastening mechanisms on the back of therelevant pouches (see section 11)
  - bar-tacks to extend along the full depth of the webbing strips

- appropriately spaced to acceptably accommodate the pouch attachment

10.3.2 Each inside back panel shall be:

- lined with jacket lining material (see 6.14) and optional mesh lining (see 6.15)
- fitted with a webbing extraction strap
  - sewn through all layers
  - all attachment stitchings of the extraction strap shall penetrate all layers of the back panel, including the reinforcement webbing strip positioned on the outside upper back
  - have a handle loop of appropriate length
- fitted with an adjustable waist belt
  - to consist of two adjustable lengths of elastic webbing (see 6.5), i.e. a left and right section
  - properly secured
  - of nominal finished length as given in figure 15 (before adjustment)
  - fitted with touch and close fastener to facilitate adjustment

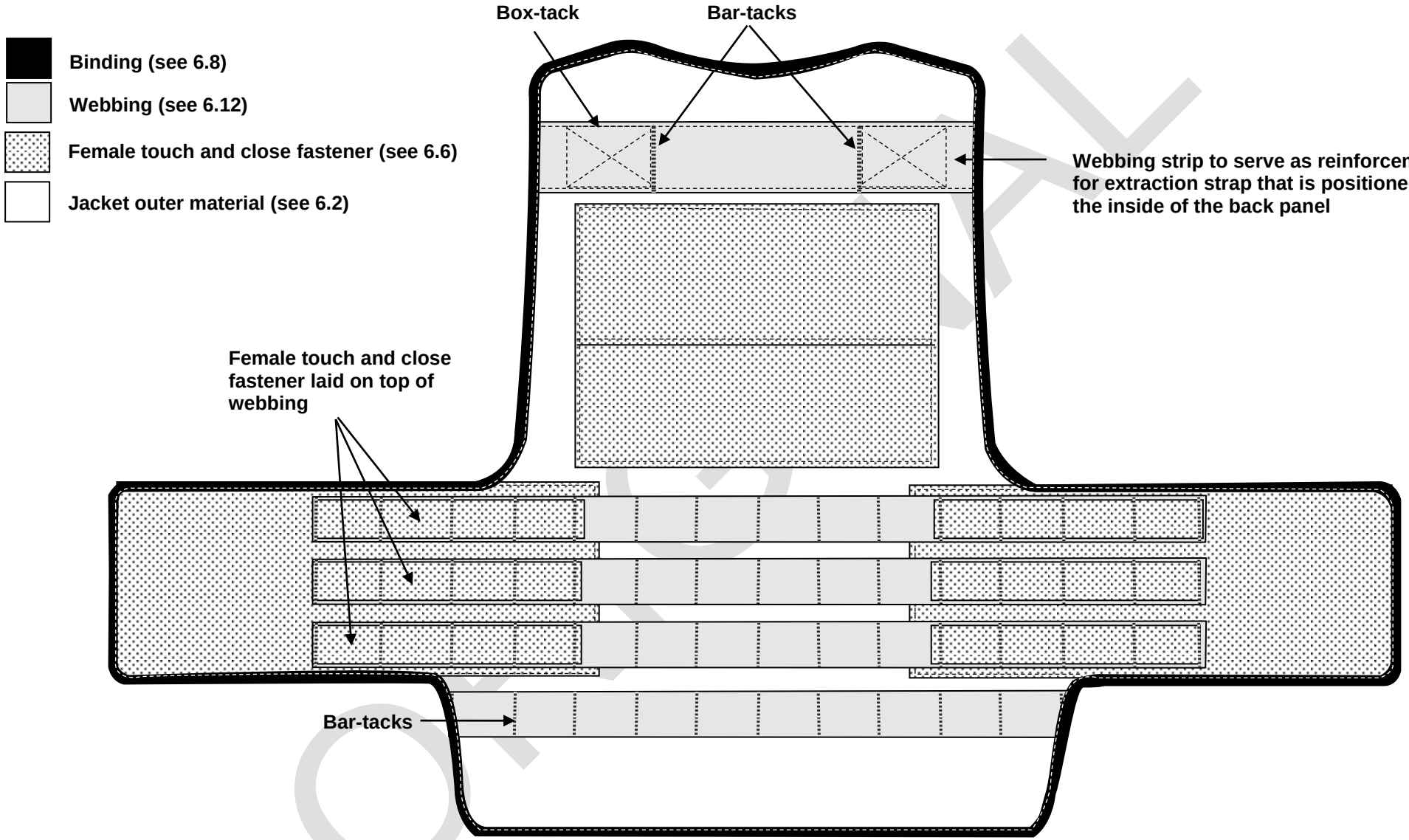


Figure 13 – Example of typical face side of back panel

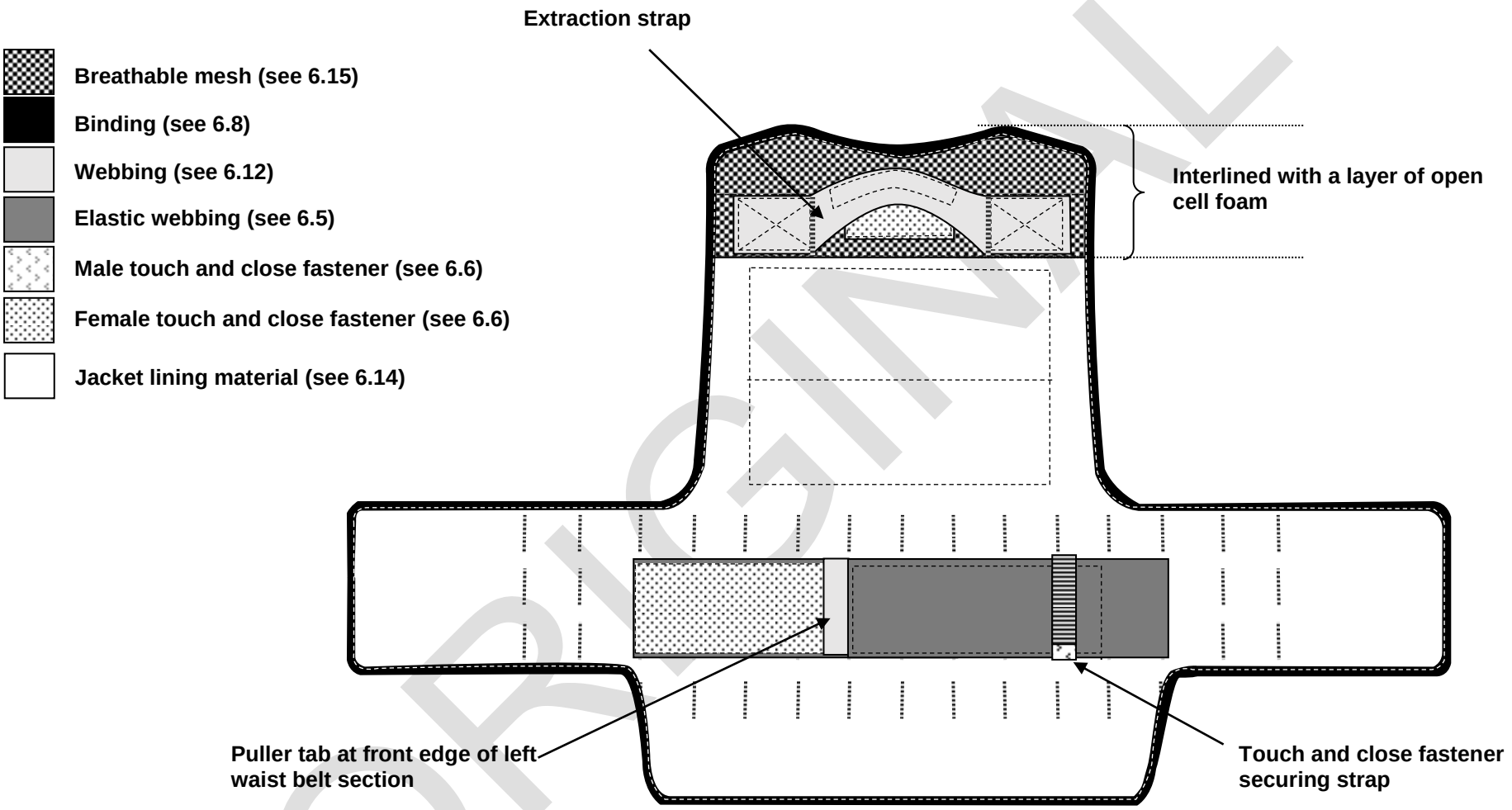


Figure 14 – Example of typical inside view of back panel (waist belt fastened)

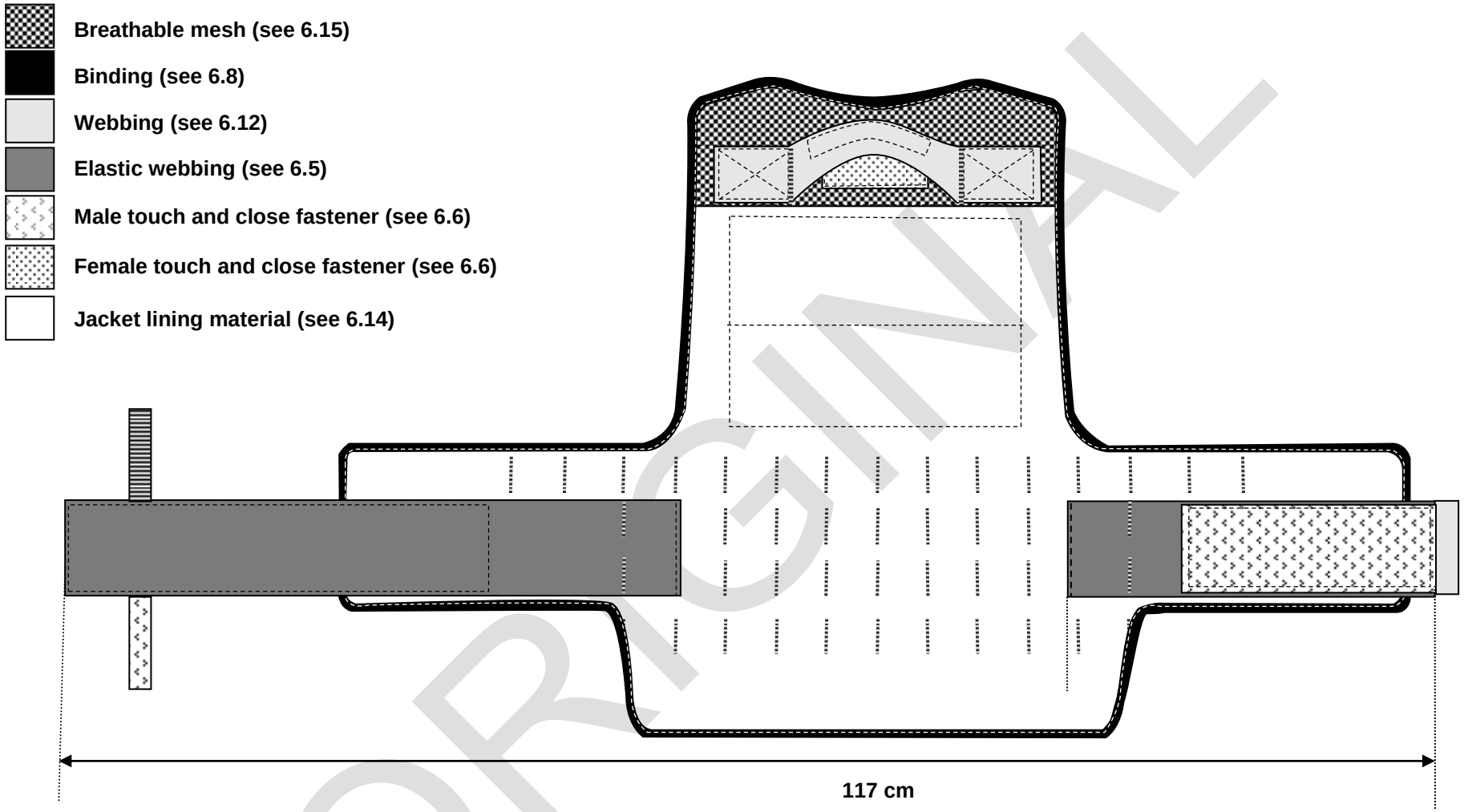


Figure 15 – Example of typical inside view of back panel (waist belt loose)

10.4 Shoulder panel of jacket

10.4.1 General

- each shoulder panel shall be made from jacket outer material as specified in 6.2
- each shoulder panel shall be lined with breathable lining material (see 6.3)
- each shoulder panel shall be interlined with closed cell foam that shall correspond with the pattern and shape of the shoulder panel and result in a minimum thickness of 8 mm for complete textile pad
- suggested material layering shall be as given in figure 17
- shoulder panels shall be shaped as to give protection to the shoulder and bicep area when worn
- outer edges to be bound with binding or appropriately finished

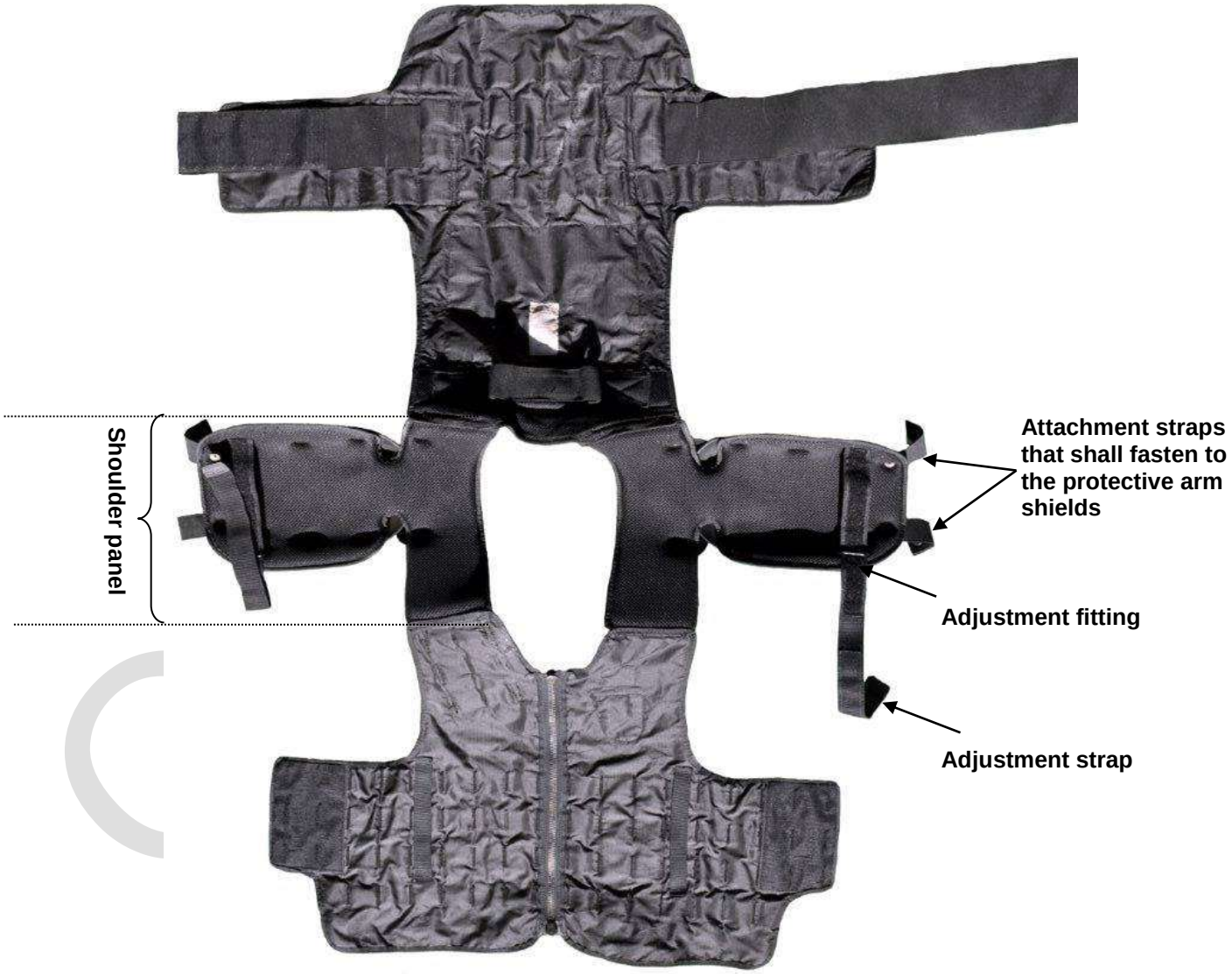


Figure 16 – Example of typical inside view of jacket, identifying the elements on the underside of the shoulder panels

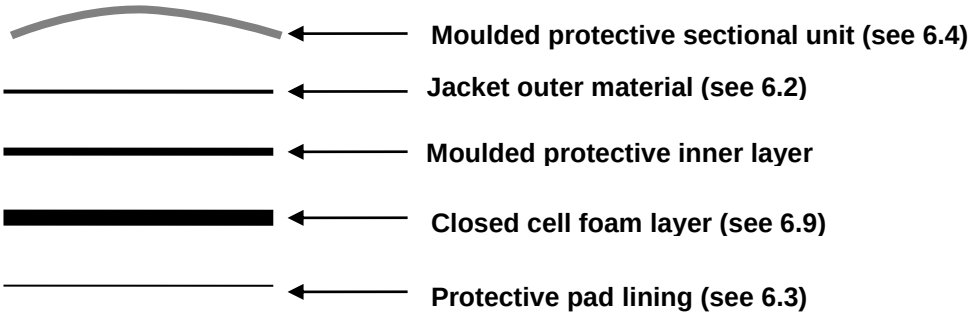


Figure 17 – Example of typical layering for the shoulder panels

10.4.2 Each underside of the shoulder panel shall be:

- fitted with at least one adjustable strap
  - of webbing
  - of such length to accommodate all sizes
  - cut ends to be heat-sealed
  - free end of strap to be either folded and stitched or fitted with a moulded end
  - strap to be fitted with laid-on lengths of touch and close fastener to facilitate adjustment
- fitted with an acceptable adjustment fitting
  - positioned in such a way that it shall neatly accommodate the adjustable webbing strap

10.4.3 Each upper side of the shoulder panel shall be:

- fitted with modular moulded protective sectional units (see 6.4)
  - moulded protective sectional units shall overlap each other in such a way that it shall allow the arm to move without restriction and without exposing the area it is intended to protect
  - moulded protective units to be attached to the shoulder panels through all layers by means of heavy duty rivets or stitchings (as appropriate)
- fitted with at least two connecting straps that shall securely fasten to the protective arm shields (see 12.2)

11. Detachable pouches

11.1 General

- minimum of four detachable pouches shall be supplied
  - one radio pouch (see figure 18 for example)
  - one lower left front pouch (see figure 19 for example)
  - one lower right front pouch (see figure 20 for example)
  - one back pouch to house the full face mask (see figure 21 for example)
- made from jacket outer material (see 6.2) and lined with lining as given in 6.14
- all outer cut edges to be bound with binding

- all pouches to be fitted with drainage holes at the base of the pouch
  - drainage holes to be either embroidered eyelets or metal eyelets
  - to have a minimum opening size of 12.5 mm^2 and maximum of 20 mm^2
- all pouches shall have pocket flaps that shall fasten with quick release buckles on the outside (except the radio pocket)
- where required, the pockets shall have additional webbing straps on the inside to secure the position of the contents of the pouch
- the back panel of each pouch shall be fitted with two to four webbing straps (depending on the size of pouch) that are properly secured
  - back panel webbing straps shall facilitate the attachment and detachment of the pouches to and from the horizontal webbing strips of the jacket
  - back panel straps shall be threaded through the horizontal webbing strips on the front and back panels and secured with press stud fastener onto the body of the pouch

11.2 Radio pouch

- of approximate dimensions as given in figure 18
- an example of a typical radio pocket is given in figure 18

Figure 18 – Approximate dimensions of typical radio pouch (not limited to the design as given above)

11.3 Lower left front pocket

- of approximate dimensions as given in figure 19
- an example of a typical design is given in figure 19
- fitted with elastic webbing loops on the inside of the pouch
- construction and attachment mechanism at back to be such that the pouch can carry contents of up to 1 kg without tearing or detaching

Figure 19 – Approximate dimensions of typical lower left pouch (not limited to the design as given above)

11.4 Lower right front pocket

- of approximate dimensions as given in figure 20
- an example of a typical design is given in figure 20
- construction and attachment mechanism at back to be such that the pouch can carry contents of up to 1 kg without tearing or detaching

Figure 20 – Approximate dimensions of typical lower right pouch (not limited to the design as given above)

11.5 Face mask pouch (back pouch)

- of approximate dimensions as given in figure 21
- an example of a typical design is given in figure 21
- construction and attachment mechanism at back to be such that the pouch can carry a full face mask without tearing or detaching

Figure 21 – Approximate dimensions of typical face mask pouch (not limited to the design as given above)

12. Arm protection shields

12.1 General

- supplied as a left and right arm protection shield and clearly marked as such
- to comply with the performance requirements as given in section 14
- fitted with moulded protective sectional units that shall function as impact absorption buffers (see 6.4)
- supplied in a single size that shall be adjustable to fit all

12.2 Design requirements

- to be detachable and adjustable
- be of an ergonomic design that shall comfortably fit and protect the elbow and lower arm
- incorporate a flexible hinge system between the elbow and lower arm that shall facilitate movement
  - the interconnecting strip used to construct the hinge system shall be at least 50 mm wide
- to consist of a layered textile pad and laid-on shaped modular moulded protective sectional units
  - outer edges of textile pad shall be bound with binding or finished with an acceptable method that can withstand hard wearing
  - typical layering sequence shall be as given in figure 22
    - to be interlined with closed foam padding to result in a finished textile pad of minimum thickness 8 mm
- have a minimum of three adjustment straps of webbing and/or elastic webbing
  - adjustment straps shall be threaded through an appropriate adjustment fitting and fasten with touch and close fastener
  - all cut edges of the adjustment straps shall be heat-sealed, folded in and stitched down or alternatively be finished with a moulded plastics end tip
  - after the adjustment straps have been secured in the desired position, it shall not loosen or become undone without deliberate action from the wearer
  - permanently secured to the arm shield through all layers and sandwiched between the textile pad and moulded protective sectional unit
- fitted with at least two heavy duty press stud sections (or acceptable alternative attachment mechanism) that shall fasten to the shoulder panel of the jacket (see 10.4.3)

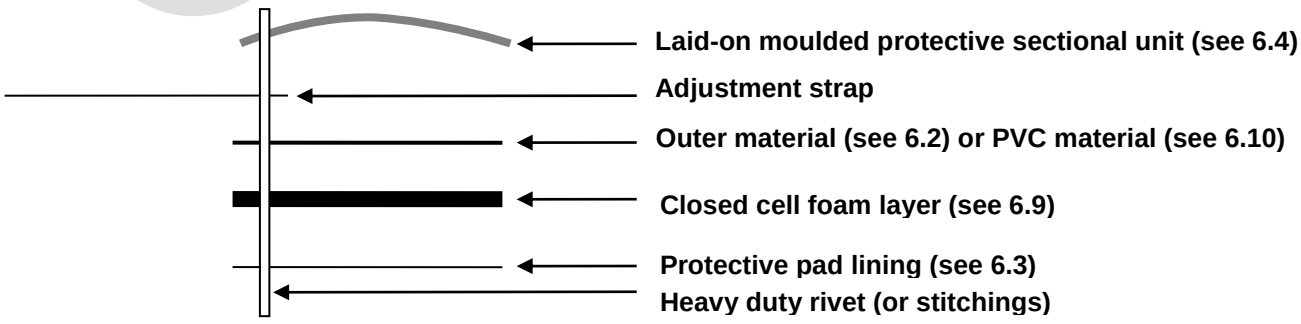
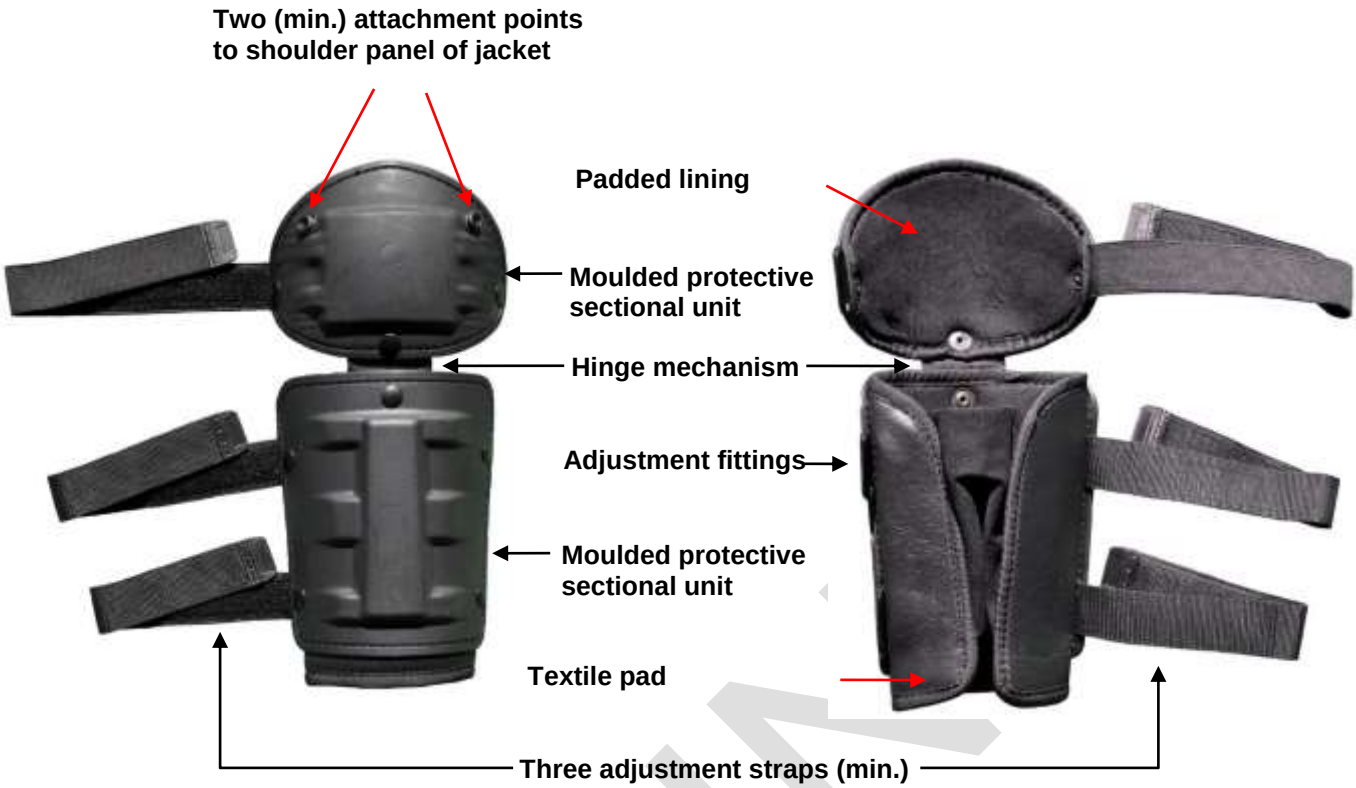


Figure 22 – Typical layering of protective arm shield (minimum amount of layers)



NOTE: The above image is an example of a typical arm protection shield, but not limited to what will be deemed as acceptable.

Figure 23 – Compulsory elements required on the protective arm shields

13. Leg protection shields

13.1 General

- supplied as a left and right leg protection shield and clearly marked as such
- supplied in different sizes as to accommodate all sizes required by the TMPD
- fitted with moulded protective sectional units that shall function as impact absorption buffers (see 6.4)

13.2 Design requirements

- to be detachable and adjustable
- be of an ergonomic design that shall comfortably fit and protect the knee, shin ankle and foot bridge
- to extend from at least 20 mm above the knee position and overlap the foot bridge by at least 70 mm
- to be flexible at the knee and shin overlapping points as well as at the upper foot position and ankle extensions
- to consist of a layered comfort pad and laid-on modular moulded protective sectional units
  - outer edges of comfort pad to be bound with binding or alternatively finished with an acceptable durable method
  - typical layering sequence shall be as given in figure 24

- to be interlined with closed foam padding to result in a finished textile pad of minimum thickness 8 mm

- have a minimum of three leg adjustment straps and one ankle strap of webbing and/or elastic webbing
  - adjustment straps shall be threaded through an appropriate adjustment fitting and fasten with touch and close fastener
  - all cut edges of the adjustment straps shall be heat-sealed, folded in and stitched down or alternatively be finished with a moulded plastics end tip
  - after the adjustment straps have been secured in the desired position, it shall not loosen or become undone without deliberate action from the wearer
  - permanently secured to the leg shield through all layers and sandwiched between the textile pad and moulded protective shield
- in addition to the other adjustment straps, each leg shield to be preferably fitted with an adjustable stirrup strap
- the internal clearance between the moulded protective sectional unit and textile comfort pad at the shin area shall be at least 30 mm

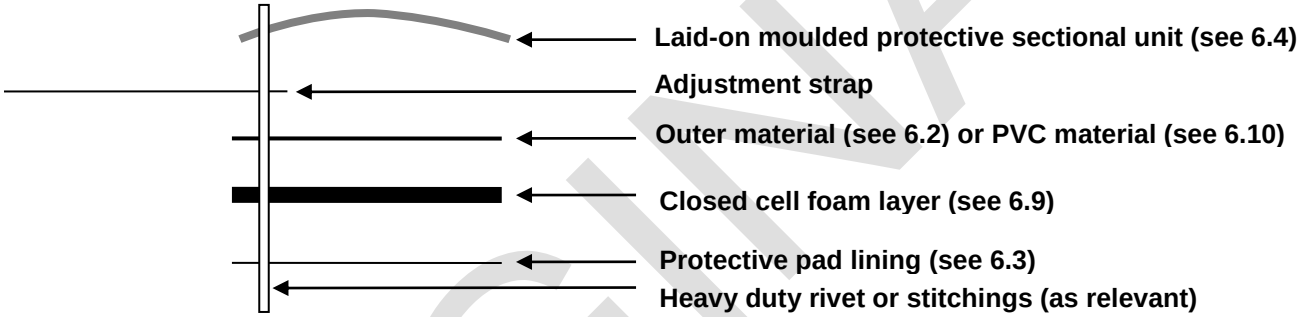


Figure 24 – Typical layering of leg protection shields (minimum amount of layers)

NOTE: The above image is an example of a typical leg protection shield, but not limited to what will be deemed as acceptable

Figure 25 – Compulsory elements required on the leg protection shield

14. Protection performance requirement

The body protection system shall provide sufficient resistance to penetration whereby a cylindrical bat (diameter 60 mm) shall not come within contact of the inner lining when a force of 245 N is applied at the middle of the shin or forearm area.

15. Packaging and marking

15.1 Packing

15.1.1 The body protection system (consisting of a jacket with shoulder protection, four detachable pockets, protective arm shields and protective leg shields) shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- packed as follows:
  - jacket and a left and right arm pad shall be packed together in a plastics envelope of suitable size and shape
  - each pair of leg pads, consisting of a left and right leg pad shall be packed together in a plastics envelope of suitable size and shape
  - the four different sizes pouches shall be packed together in a plastics envelope of suitable size and shape unless otherwise specified in the order or contract
- acceptably packed for transportation in acceptable bulk containers that comply with the following:
  - coffin type boxes with a base and lid
  - double sided corrugated board boxes

15.1.2 Contents of bulk container:

- total mass of packed bulk container shall not exceed 25 kg
- only body protection components of the same size designation and item description (as relevant and as specified in 16.1.1) be packed together in a bulk container
- each bulk container shall contain the same amount of items per type (per consignment)
- the number of units packed in a bulk container shall always be a factor of five, e.g. 5,10 (according supplier's discretion)

NOTE: *Different sizes and different items (with the exception of the jacket and Arm pads, see 16.1.1) may never be packed together in a bulk container. The last bulk container of EACH SPECIFIC SIZE (if relevant) of EACH ITEM per consignment may contain QUANTITES that deviate from the prescribed amount of items. If this is the case, the supplier will mark this container with a clearly visible red sticker at each outer end of the lid for easy identification.*

15.2 Marking

15.2.1 Plastics envelopes

Each envelope to be clearly marked with the following information:

- the item description as given in table 1
- the size designation (if relevant)

15.2.2 Bulk containers

Each bulk container shall have a label securely attached to the outside. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the manufacturer's name or trade mark or both
- the order number or contract number
- the item description
- the quantity of the item
- the size designation of the item (if relevant)
- the year of manufacture
- the invoice number(s)
- the total mass of the packed container
- the inspection Certificate Number

15.3 Additional marking

When so required by the Tshwane Metropolitan Police Department, jackets, pockets, arm shields and leg shields, plastics bags or containers (or any combination of these) to bear information additional to that specified above.

16. Warranty

To be as specified in the order or contract.

17. Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from the South African Bureau of Standards [*].

AATCC method 20, *Fiber analysis: Qualitative*. (Available from World Wide Web http:// www.aatcc.org /Technical/Test_Methods/scopes/tm20.cfm)

ISO 3801, *Textiles – Woven fabrics – Determination of mass per unit length and mass per unit area.*

ISO 6892-1, *Metallic materials -- Tensile testing -- Part 1: Method of test at room temperature.*

ISO 17025:2005, *General requirements for the competence of testing and calibration laboratories.*
SANS 105-B02/ISO 105-B02, *Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test.*
SANS 105-E01/ISO 105-E01, *Textiles – Tests for colour fastness – Part E01: Colour fastness to water.*
SANS 105-E04/ISO 105-E04, *Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration.*
SANS 142, *Narrow elastic fabrics and strip.*
SANS 1362, *Sewing threads.*
SANS 1423-1, *Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics.*
SANS 1822, *Slide fasteners.*
SANS 1823, *Touch and close fasteners.*
SANS 5488, *Width of ribbons and other narrow fabrics.*

[*] ***South African Bureau of Standards: Tel. +27 (0) 12 4287911***

ANNEX A

(Normative)

Bid sample submission requirements

In addition to the bid documents, each bidder shall submit the following:

- certificates of conformance (COC)/test reports of all the materials used shall be submitted together with the bid documents
- certificates of conformance/ test reports shall not be older than 12 months
- only test reports from a SANAS or ISO 1705 accredited test laboratory shall be accepted
- the supplier shall submit a certified copy of the original test report(s)
- a sample that complies with the requirements of this private specification shall be submitted together with the bid documents to TMPD
- the bid sample shall be clearly marked with the bid number
- exemption certificates from the Department of Trade and Industry, if relevant
- unsuccessful bidders must collect their samples within one month after the bid has been awarded
  - failure in this regard will result in the sample becoming the property of TMPD

ANNEX B

(Normative)

Special conditions of bid
(Applicable to the successful bidder)

B-1 GENERAL

B-1.1 Unless otherwise stated, the TMPD (or an organization appointed by it), shall be the inspecting authority.

B-1.2 Two pre-production sample body protection systems, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. **Each one of these sample body protection systems shall be accompanied by the relevant certificates.** It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

B-1.3 The body protection system shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on body protection system supplied to this specification may be in progress (where applicable)

B-1.4 The contractor shall inspect the finished body protection system for compliance with the specification before submitting them to the inspecting authority for final inspection.

B-1.5 Before acceptance, the body protection system shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

B-2 DOCUMENTATION

One container of each consignment shall be marked “DOCUMENTS” and in addition to the body protection system, shall contain the following:

a) The packaging slip or delivery note;
b) where applicable the inspection certificate(s);
c) a copy of the invoice containing the following information:
- the order number
- the financial authority number
- a full description of the consignment, i.e. quantity, etc

For office use only		
HISTORY SHEET		
Version	**DATE**	**AMENDMENTS/HISTORY**
01.0	July 2018	First release.

Item 2 - 3.1.2.1 - Nr 1 - Annexure B 1 - Body Protection System (POP)

PRIVATE SPECIFICATION

Prepared for the

Tshwane Metropolitan Police Department

HEAD PROTECTION SYSTEM, RIOT GEAR

TMP 319
Version 01.0/July 2018

1. Scope

This specification covers the material, general design and performance requirements for head protections systems to serve as riot gear for members of the Tshwane Metropolitan Police Department.

NOTE: ***All components shall be manufactured in the Republic of South Africa. In instances where the raw material and/or finished components are not available in the Republic of South Africa, the onus shall be on the bidder to apply for exemption certificates from the Department of Trade and Industry. Attention is drawn to Annex A.***

2. Definitions

For the purpose of this specification the following definitions shall apply:

Acceptable:	Acceptable to the Tshwane Metropolitan Police Department
Comfort padding:	Material that will assist in providing comfort
Chin cup:	Cup mounted on the webbing harness in which the wearer's chin fits
Harness/retention system:	Complete assembly of components which causes the helmet to stay in position on the wearer's head, including all adjustment mechanisms and comfort enhancers
Head protection system:	Fully assembled complete system
Nominal:	Subject to the tolerances normal to good manufacturing practice
Outer shell:	Hard outer case of the helmet
Protective padding:	Material that will serve the purpose to absorb impact energy
SANS:	South African National Standard
TMPD:	Tshwane Metropolitan Police Department

3. Product overview

Each head protection system shall consist of the following main components which shall be worn together and be fully compatible:

- a helmet with adjustable visor and detachable back neck curtain
- a full-face mask that can be attached to the helmet on the outside
- two replaceable canister filters for protection against teargas

Components of the head protection system listed in table 1 may be ordered as a full ensemble, as individual items or any combination as required by the TMPD.

Table 1 – List of items

Item description
Helmet, Riot gear and carry bag
Mask, Gas, Full-Face, Respiratory, Helmet attachments, Riot gear
Filter, Gas Mask, Riot gear

4. Digital images

The head protection system depicted in the images below is an example of a suitable type, but not limited to what will be deemed as acceptable.

Figure 1 – Example of typical side views of helmet and visor

Figure 2 – Example of typical front view of helmet and visor

Figure 3 – Example of typical back view of helmet and neck curtain

Figure 4 – Example of typical inside view of helmet

Figure 5 – Example of typical detachable neck curtain

Figure 6 – Example of typical face mask

Figure 7 – Example of typical design of helmet and face mask integration

Figure 8 – Example of typical canister filter for protection against teargas

5. Client Furnished Materials

No materials will be supplied by the Tshwane Metropolitan Police Department.

6. Component requirements

6.1 General

- all materials used for the manufacture of the head protection system shall be non-toxic and non-irritant
- the components given below shall be applied in such a way as to ensure that they comply with the relevant performance requirements as given in section 10 (individual components as well as complete system, as relevant)

6.2 Outer shell

- to be manufactured from impact resistant ABS (Acrylonitrile Butadiene Styrene)
- material to be such that it shall not undergo reduction in protective ability under the influence of ageing or during the circumstances of use to which the helmet is normally subjected
- have a matt finish and such that it shall not peel or crack for the full service life of the helmet
- colour to be an acceptable match to colour No. 1022c-04 “Combat Blue” of CKS 129 (or closest available colour to this)

6.3 Inner shock-absorbing structure

- acceptable form-fitting, shock absorbing protective polystyrene pad such that it shall be fit for purpose in order to comply with the relevant performance requirements as given in section 10

6.4 Lining fabric

- to be an acceptable breathable synthetic fabric with a moisture management system
- to comply with the performance requirements as given in 10.5
- preferably treated with an anti-microbial finish
- colour to be black

6.5 Foam

- to be acceptable closed cell foam
- density and thickness to be such as to be fit for purpose
- colour to be charcoal

6.6 Neck curtain material

- to be an acceptable flame retardant PVC material or acceptable alternative that will enhance safety of the wearer

- flammability requirements to comply with performance class C, Category 1 of SANS 1423-1 “Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics”
- to comply with the performance requirements as given in 10.5
- colour to be an acceptable match to the colour of the outer shell (or black)

6.7 Metal components

6.7.1 General (applicable to all metal components)

- all metal components shall be electroplated to prevent corrosion
- to be smooth and free from burrs and sharp edges
- such that it shall neatly accommodate the webbing with which it is used

6.7.2 Rivets

- acceptable heavy duty metal rivets

6.7.3 Press studs

- acceptable heavy duty metal press studs of the male and female type

6.8 Touch and close fastener

- to comply with the requirements of SANS 1823 “Touch and close fasteners”
- width to be appropriate for where it is used
- colour to be black

6.9 Chin pad cover fabric

- to be an acceptable brushed synthetic fabric with wicking properties or alternatively a soft bovine leather
- to comply with the relevant performance requirements as given in 10.5
- preferably treated with an anti-microbial finish
- colour to be black

6.10 Webbing

- to comply with the requirements as given in table 2
- colour to be black
- to be soft to the degree that it shall not chafe the face of the wearer
- breaking and tensile strength to be such that it shall be fit for purpose in order to comply with the performance requirements as given in section 10

Table 2 – Webbing requirements

1	2	3
Property	**Requirement**	**SANS number** (unless otherwise indicated)
Composition, %	All continuous filament polyester	AATCC 20
Thickness, mm	1.0 ± 0.1	Physical analysis
Selvedge	Lockstitch	
Width, mm, min.....	20	5488

6.11 Visor material

- polycarbonate of minimum thickness 2 mm
- transparent without any tint
- such that it shall not distort the vision of the wearer
- scratch proof
- such that it shall not undergo reduction in protective ability when it comes in contact with paint or petrol
- to have a non-glare and anti-misting coating to minimise fogging and enhance visibility

6.12 Threads

- to comply with relevant requirements of SANS 1362 “Sewing threads”
- colour to be black
- continuous filament thread, ticket No 40 (or as fit for purpose)

6.13 Helmet carry bag outer material

- to be an acceptable hard wearing Polyamide fabric
- such that the fabric shall have no breaks after a minimum of 10 000 rubs when tested for abrasion resistance in accordance with SANS 6009 “Abrasion resistance of textile fabrics (Martindale test)”
- colour to be black

7. Workmanship

The head protection system shall be:

- made with first-class workmanship throughout
- of uniform and acceptable make, colour and finish

The head protection system shall be free from:

- defects, that affect their appearance or may affect their serviceability (or both)
- cracking
- marks, spots and stains incurred in the making-up

Seams and stitches shall be:

- smooth and uniform
- free from twists, pleats and puckers
- sufficiently extensible to avoid seam cracking and undue shrinkage in use

Ends of sewing shall be:

- trimmed and loose threads removed
- back-tacked if unsecured (at least 5 mm)

8. Sizes and dimensions

The helmet (outer shell) shall be supplied in a single shell size, but with multiple headband and inner lining combinations to facilitate adjustment to make provision for sizes 52 to 62.

9. Design requirements

9.1 General

- the head protection system shall be of a design that ensures comfortable wearing by men and women based on a singular shell design with multiple head band and/or inner lining geometries
- each head protection system shall consist of the following main components
  - helmet (see 9.2) in carry bag (see 9.5)
  - full face mask (see 9.3)
  - two replaceable filter canisters for protection against teargas (see 9.4)

9.2 Helmet

- each helmet shall consist of the following main elements
  - a hard outer shell (see 9.2.1)
  - inner shell consisting of the following (see 9.2.4)
    - protective padding/inner shock-absorbing structure
    - comfort padding/inner liner
  - adjustable headband (see 9.2.5)
  - adjustable webbing chin strap harness (see 9.2.6)
- to comply with the performance requirements as specified in 10.1
- applied adhesives shall not affect the performance parameters of the helmet
- all sewing shall be done using lockstitches throughout

9.2.1 Outer shell

NOTE: *All holes, perforations and fittings attached to the outer shell shall be such that it shall not cause the helmet to lose its integrity.*

- made from materials as specified in 6.2
- have a spherical shape
- have sufficient ventilation holes on the sides/and or back to ensure comfortable wearing
  - the total area of such ventilation holes shall not be less than 150 mm^2 and not more than 450 mm^2
- sufficient clearance shall exist between the wearer's head and shell sides as to facilitate the wearing of a communication piece
- a black rubber edge trim shall be affixed to the circumference of the outer edges of the shell
- to be fitted with a permanently attach visor (see 9.2.2)
- the compulsory fittings/attachments to the exterior of the shell shall be as given in figure 9
- the compulsory fittings/attachment to the interior of the shell shall be as given in figure 10

9.2.2 Visor

- made from materials as given in 6.11
- to be incrementally adjustable to facilitate at least three adjustment positions in addition to the fully open and fully closed position
- both sides of the visor shall be fitted with a ratchet system to prevent the visor from moving out of position
- a rubber seal shall be fitted along the top edge of the visor to ensure that fluids (e.g. rain) do not enter between the helmet and the visor from the top
- such that when a full face mask (see 9.3) with attached filter is worn, the visor shall remain adjustable and shall be able to acceptably open and close over the mask

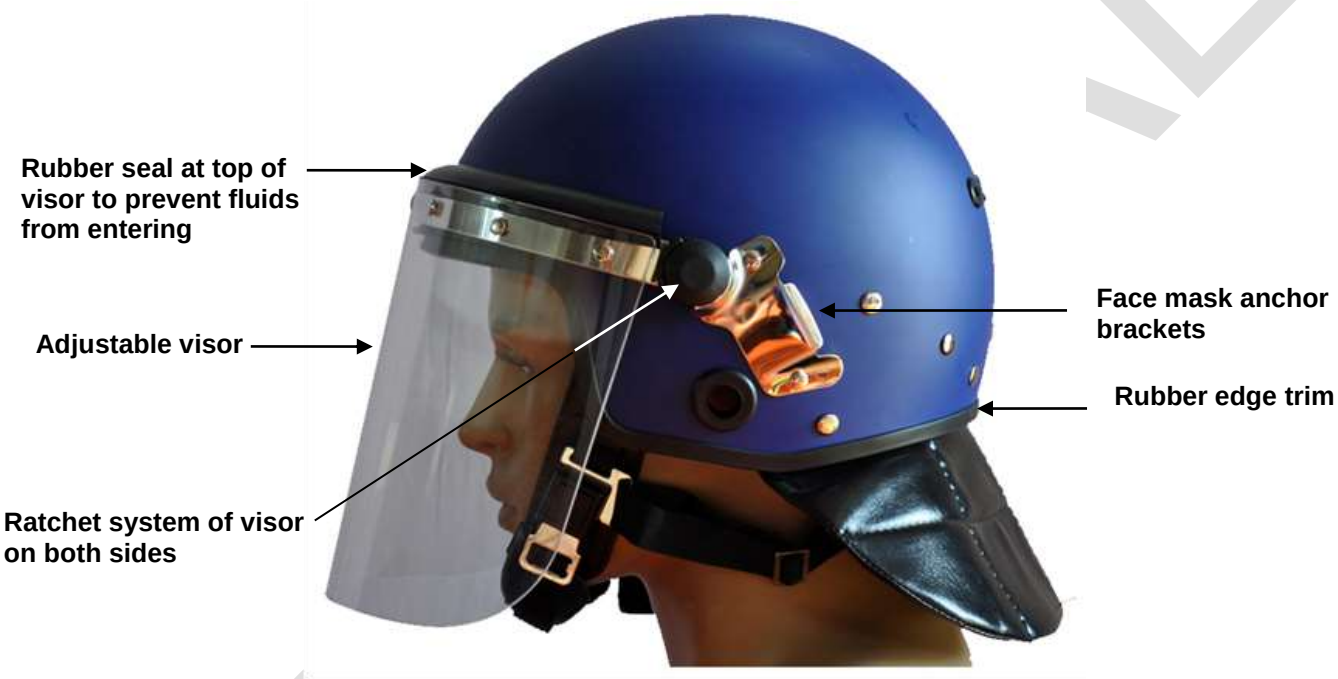


Figure 9 – Compulsory fittings on the exterior of the helmet (image is an example of a suitable helmet)

9.2.3 Neck curtain

- made from neck curtain material (see 6.6), lined with the same material and interlined with a layer of acceptable closed-cell foam to result in a nominal finished thickness of 10 mm
- finished neck curtain shall be of such length as to encompass a minimum of 30 % of the helmet circumference
- to be detachable for easy replacement/cleaning purposes
  - neck curtain to fasten on the inside neck area of the outer shell
  - a minimum of four press studs (see 6.7.3) shall be used on the neck curtain and corresponding sections shall be attached to the outer shell
- the neck curtain shall be designed in such a way that after attachment to the shell, it shall protrude a minimum depth of 12 cm from beyond the bottom edge of the helmet (see figure 10)

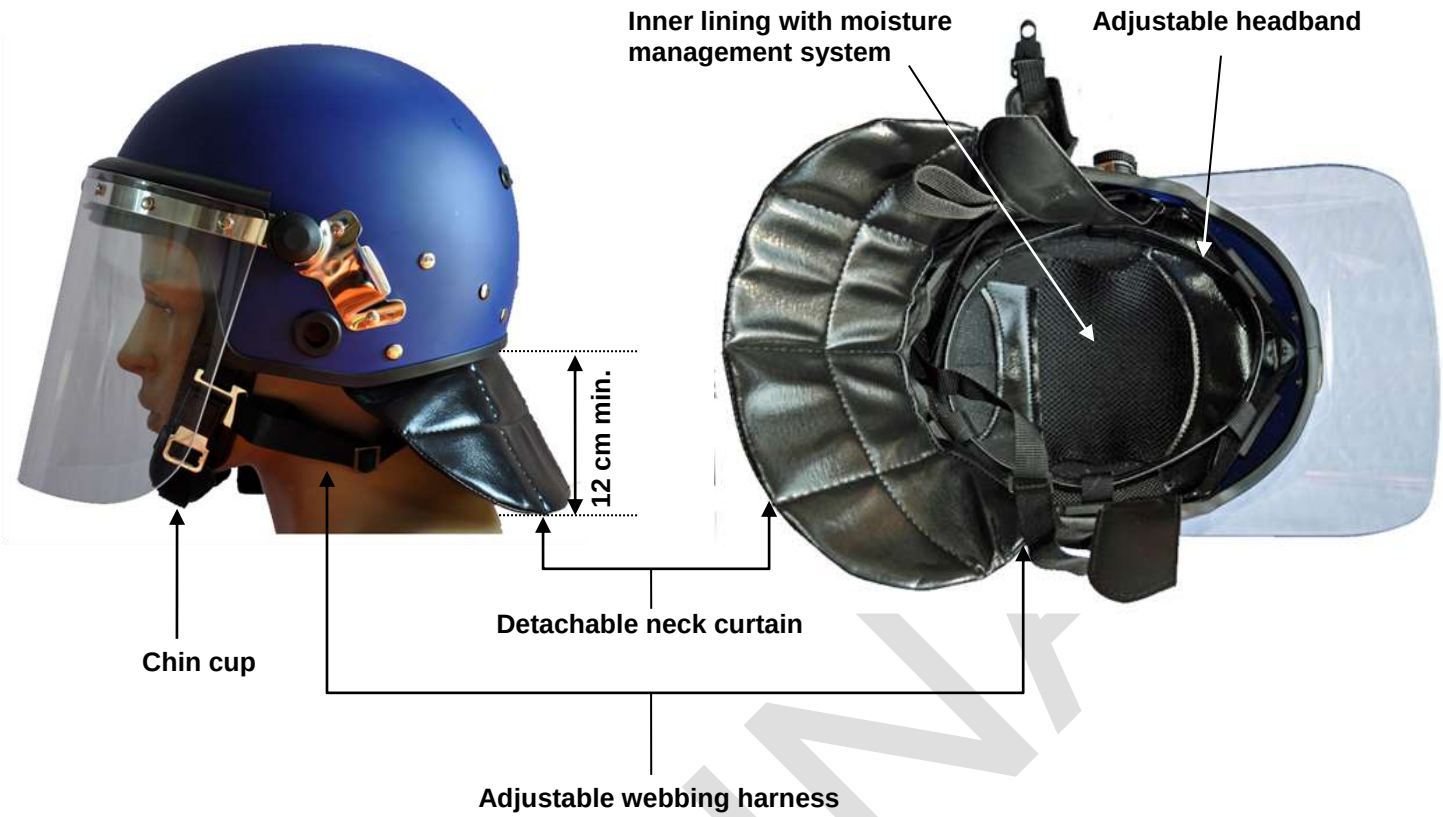


Figure 10 – Compulsory fitting on the interior of the helmet (image is an example of a suitable helmet)

9.2.4 Inner shell

- designed in such a way that it shall not exert pressure on specific points of the wearer's head
- consist of a protective pad and a comfort head cradle
- the protective pad shall be made from materials as specified in 6.3 that shall contribute to the absorption of kinetic energy during impact
- the protective pad shall be covered by breathable lining materials (see 6.4) and shaped and formed to fit the outer shell impeccably
- in addition to the protective pad, there shall be a floating adjustable mesh head cradle that shall be designed in such a way as to enable full functionality of the moisture management system and provide sufficient comfort by means of padding/foam
- the internal vertical clearance between the shell and head cradle, when adjusted to a proper fit and regardless of head size, shall not be less than 20 mm

9.2.5 Adjustable head band

- made from acceptable materials that are comfortable and strong (see 6.4 and 6.9 for guidance)
- may be interlined with webbing to provide sufficient strength
- to form part of a system that shall enable the head band to be adjusted
- head band to be of acceptable width to ensure maximum comfort
- to be secured to the inside of the helmet by at least six (6) attachment points
- to be fitted with touch and close fastener to facilitate quick release and easy adjustment

Item 2 - 3.1.2.1 - Nr 2 - Annexure B2 - Head Protection Helmet (POP)

9.2.6 Adjustable webbing chin strap harness

- all cut ends of the webbing shall be heat sealed to prevent fraying
- webbing shall be as given in 6.10
- to be adjustable at two points (minimum)
- the webbing harness shall only be freed by deliberate action only
- length to be such that it shall make provision for adjustment
- attachment mechanisms of the webbing harness to be properly secured to the shell at the back and sides
- to incorporate a chin cup that shall be manufactured from a soft moulded inflexible material that shall be covered by material as specified in 6.9
  - chin cup position to be adjustable, but once the desired position has been determined, it shall be secured in that position and shall not slide to another position without deliberate action
- fitted with an attachment strap
  - of 20 mm wide webbing
  - permanently attached to the helmet and situated between the shell and the chin strap on the side
  - to be adjustable by means of touch and close fastener
  - strap to be of minimum finished length 32 cm, folded onto itself, resulting in a loop that fastens by means of touch and close fastener

9.3 Full face mask

- to have a U-shaped seal, silicone flange designed for a long shelf life and silicone expiratory valve
- to have an adjustable strap and hook system to enable quick attachment to the helmet anchor points
- to comply with the performance requirements as specified in 10.2

9.4 Filters

- to be fully compatible with the full face mask, helmet and visor
- two canisters shall be supplied together with each head protection system ordered
- to comply with the performance requirements as specified in 10.3

9.5 Helmet carry bag

Each helmet shall be delivered in a carry bag (see 12.1.1):

- made from materials as given in 6.13
- to have a draw-string closure
- of such size as to neatly accommodate the helmet

10. Performance requirements

10.1 Helmet

- the head protection system shall be able to ensure that the force transmitted during shock does not exceed 5.0 kN when tested in accordance to paragraph 6.6 of SANS 1397/EN 397 "*Industrial safety helmets"*

10.2 Full face mask

- to comply with the requirements of SANS 50136/EN 136, **"**Respiratory protective devices - Full face masks - Requirements, testing, marking" to offer acceptable respiratory protection in combination with the attributes as given in table 3

Table 3 - Technical requirements for the full-face mask

1	2	3
Aspect	**Unit**	**Requirement**
Inhalation resistance tested at 30 litres/minute	mbar	Maximum 0.50
Inhalation resistance tested at 95 litres/minute	mbar	Maximum 1.50
Inhalation resistance tested at 160 litres/minute	mbar	Maximum 3.0
CO_2 in the inner mask	%	< 1
Field of vision	%	>75

10.3 Filters

- the canister filters used for the full face mask shall provide sufficient protection against tear gas and comply with the requirements of BS EN 14387:2004+A1:2008, "Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking"
- the particles filtering of the canister filter shall be level P3 of BS EN 143:2000, "Respiratory protective devices. Particle filters. Requirements, testing, marking" (high efficiency filter 99.95%)

10.4 Mass

- the nominal mass of a fully assembled helmet (helmet with attached visor, inner protective linings and neck curtain) shall be 1355g when weighed on a calibrated mass balance at room temperature (given for guidance)

10.5 Textile component performance requirements

- have a minimum colour fastness rating of 4 to light when tested in accordance with SANS 105-B02/ISO 105-B02 "Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test"
- have a minimum colour fastness rating of 4 to perspiration when tested in accordance with SANS 105-E04/ISO 105-E04, *Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration*

- have a minimum colour fastness rating of 4 to water when tested in accordance with SANS 105-E01/ISO 105-E01, *Textiles – Tests for colour fastness – Part E01: Colour fastness to water.*

11. Markings and labelling of each helmet

The following information shall be printed on a label and/or embossed on the inside of the shell surface in legible and indelible block letters of height at least 3 mm and such that it shall outlast the product:

- Manufacturer's name
- Year of manufacture
- Size or size range
- Batch number

12. Packaging and marking

12.1 Packing

12.1.1 The head protection system shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- packed as follows with the relevant amount of silica gel sachets:
  - each helmet to be packed in a textile carry bag (see 9.5) and then packed in a small box
  - each face mask shall be individually packed in a plastics envelope of suitable size and shape
  - two canister filters shall be packed together in a small box
- unless otherwise specified in the order or contract, acceptably packed for transportation in acceptable bulk containers that comply with the following:
  - coffin type boxes with a base and lid
  - double sided corrugated board boxes

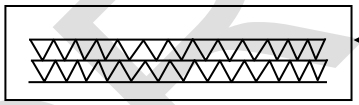


Diagram of double sided corrugated board

12.1.2 Contents of bulk container:

- total mass of packed bulk container shall not exceed 25 kg
- only helmets of the same size designation may be packed together in a bulk container
- each bulk container shall contain the same amount of items (per consignment)
- the number of items packed in a bulk container shall always be a factor of five, e.g. 5, 10 (according to the supplier's discretion)

NOTE: *Different sizes may never be packed together in a bulk container. The last bulk container of EACH SPECIFIC SIZE per consignment may contain QUANTITES that deviate from the prescribed amount of helmets. If this is the case, the supplier will mark this container with a clearly visible red sticker at each outer end of the lid for easy identification.*

12.2 Marking

12.2.1 Plastics envelopes/small box

Each envelope/small box to be clearly marked with the following information:

- the item description
- size range (as relevant)

12.2.2 Bulk containers

Each bulk container shall have a label securely attached to the outside. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the manufacturer's name or trade mark or both
- the order number or contract number
- the item description (designation)
- the quantity of the item
- the size designation of the item
- the year of manufacture
- the invoice number(s)
- the total mass of the packed container
- the Inspection Certificate Number

12.3 Additional marking

When so required by the Tshwane Metropolitan Police Department, helmets, full face masks, filters, bags, containers (or any combination of these) to bear information additional to that specified above.

13. Warranty

To be as specified in the order or contract.

14. Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from the South African Bureau of Standards [*].

AATCC method 20, *Fiber analysis: Qualitative*. (Available from World Wide Web http:// www.aatcc.org /Technical/Test_Methods/scopes/tm20.cfm)

BS EN 14387:2004+A1:2008, *Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking*

BS EN 143:2000, *Respiratory protective devices. Particle filters. Requirements, testing, marking.*

CKS 129, *Colours for textiles.*

ISO 17025:2005, *General requirements for the competence of testing and calibration laboratories.*

SANS 105-B02/ISO 105-B02, *Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test.*

SANS 105-E01/ISO 105-E01, *Textiles – Tests for colour fastness – Part E01: Colour fastness to water.*

SANS 105-E04/ISO 105-E04, *Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration.*

SANS 1423-1, *Performance requirements for textile fabrics of low flammability Part 1: Apparel fabrics.*

SANS 6009, *Abrasion resistance of textile fabrics (Martindale test).*

SANS 1362, *Sewing threads.*

SANS 1397/EN 397, *Industrial safety helmets.*

SANS 1823, *Touch and close fasteners.*

SANS 5488, *Width of ribbons and other narrow fabrics.*

SANS 50136/EN 136, *Respiratory protective devices - Full face masks - Requirements, testing, marking.*

[*] ***South African Bureau of Standards: Tel. +27 (0) 12 4287911***

ANNEX A

(Normative)

Bid sample submission requirements

In addition to the bid documents, each bidder shall submit the following:

- certificates of conformance (COC)/test reports of all the materials used shall be submitted together with the bid documents
- certificates of conformance/ test reports shall not be older than 12 months
- only test reports from a SANAS or ISO 17025 accredited test laboratory shall be accepted
- the supplier shall submit a certified copy of the original test report(s)
- a sample that complies with the requirements of this private specification shall be submitted together with the bid documents to TMPD
- exemption certificates from the Department of Trade and Industry, if relevant
- the bid sample shall be clearly marked with the bid number
- unsuccessful bidders must collect their samples within one month after the bid has been awarded
  - failure in this regard will result in the sample becoming the property of TMPD

ANNEX B

(Normative)

Special conditions of bid
(Applicable to the successful bidder)

B-1 GENERAL

B-1.1 Unless otherwise stated, the TMPD (or an organization appointed by it), shall be the inspecting authority.

B-1.2 Two pre-production sample head protection systems (two of all components ordered), shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. **Each one of these sample body protection systems shall be accompanied by the relevant certificates.** It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

B-1.3 The head protection system shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on body protection system supplied to this specification may be in progress (where applicable)

B-1.4 The contractor shall inspect the finished head protection system for compliance with the specification before submitting them to the inspecting authority for final inspection.

B-1.5 Before acceptance, the head protection system shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

B-2 DOCUMENTATION

One container of each consignment shall be marked “DOCUMENTS” and in addition to the head protection system, shall contain the following:

a) The packaging slip or delivery note;
b) where applicable the inspection certificate(s);
c) a copy of the invoice containing the following information:
- the order number
- the financial authority number
- a full description of the consignment, i.e. quantity, etc

For office use only	

HISTORY SHEET

Version	DATE	AMENDMENTS/HISTORY
00.1	June 2018	First draft
01.0	July 2018	Amend colour of outer shell. Change warranty to be as specified in the order or contract. Add reference to CKS 129.

TSHWANE METROPOLITAN DEPARTMENT

Heavy Duty Police Riot Sheild

Product Specifications

- Made of heavy duty **6.5mm thick** polycarbonate.

- **Colour:** Clear
- **Size:** 122cm(**H**) x 61cm(**W**) x 6.5cm(**Thickness**)
- Ergonomic handle which allows **one or two handed use**.
- Handle and breakaway strap **dielectric to prevent electrical pass through** and can be reversed for right or left handed use.
- Wide nylon arm strap is easily adjustable while in use

Item 2 - 3.1.2.1 - Nr 3 - Annexure B 3 - Heavy Duty Police Riot Sheild (POP)

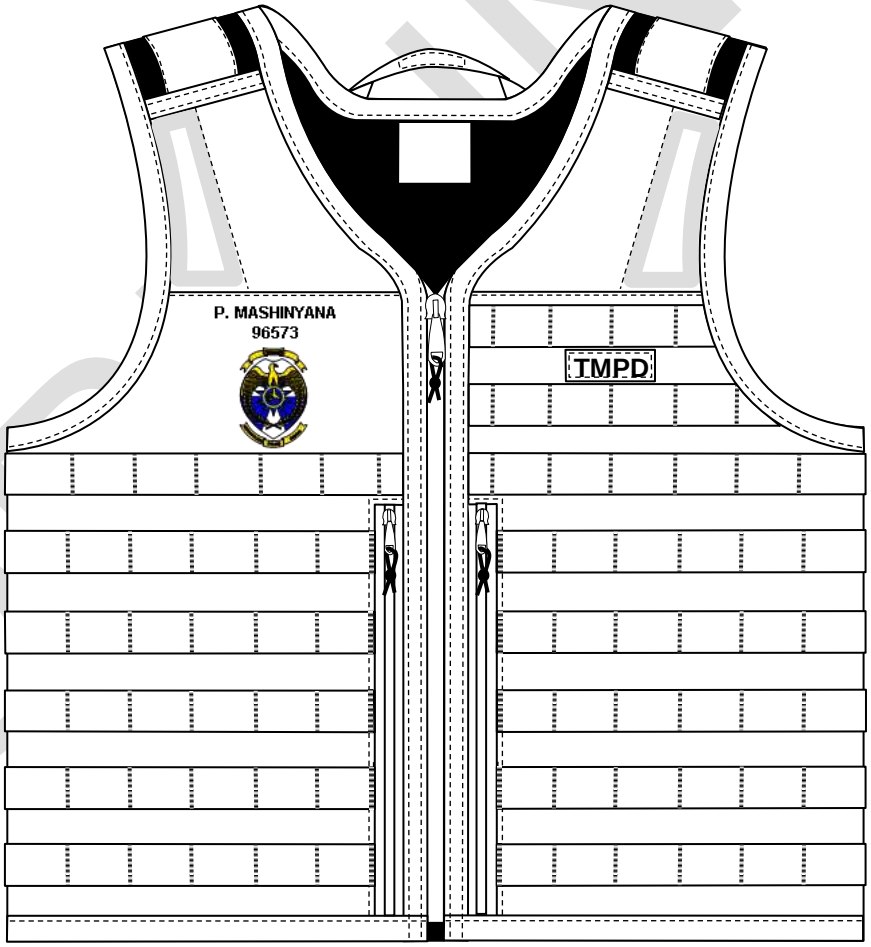
PRIVATE SPECIFICATION

Item 2 - 3.1.2.1 - Nr 4 - Annexure B 4 - Tactical Jacket and Detachable pouch (POP)

Prepared for the

Tshwane Metropolitan Police Department

TACTICAL JACKET AND DETACHABLE POUCHES



TMP 317

Version 01.0/July 2018

Item 2 - 3.1.2.1 - Nr 4 - Annexure B 4 - Tactical Jacket and Detachable pouch (POP)

1. Scope

This specification covers the material, design and make of one type of tactical jacket and eleven detachable pouches for use by personnel of the Tshwane Metropolitan Police Department. The tactical jackets and pouches covered by this specification are as follows:

Table 1 – Tactical jacket types

Jacket type	Description
1	Tactical jacket

Table 2 – Pouch types

Pouch Type	Description
A	Utility pouch
B	R5-magazine pouch
C	9mm-magazine pouch
D	Pepperspray pouch
E	Orca radio pouch
F	Tetra radio pouch
G	R1-magazine pouch
H	Shotgun ammunition pouch
I	Cable pouch
J	Smoke/grenade/stun gun pouch
K	LED pouch

NOTE: ***All components shall be manufactured in the Republic of South Africa. In instances where the raw material and/or finished components are not available in the Republic of South Africa, the onus shall be on the bidder to apply for exemption certificates from the Department of Trade and Industry. Attention is drawn to Annex B.***

2. Definitions

For the purpose of this specification the definitions given in SANS 10371 "Terms and definitions for clothing" and the following shall apply:

Acceptable: Acceptable to the Tshwane Metropolitan Police Department

Nominal: Subject to the tolerances normal to good manufacturing practice

SANS: South African National Standard

TMPD: Tshwane Metropolitan Police Department

3. Style

The style of the jacket is as follows:

- to consist of three panels
  - two front panels and one back panel
- **fronts** to:
  - consists of three layers of fabric
  - be such that the side edges extend towards the back
  - fasten with a slide fastener at centre front
  - be fitted with horizontal webbing strips along the full width and length of the fronts
  - have vertical pockets along the front edges
  - be fitted with foam inserts at the outer armholes
  - have an embroidered patch with the wording “TMPD” on the left front (refers to when worn)
  - have a sewn-on patch with each individual member’s initials, surname and force number as well as the TMPD emblem embroidered on the right front (refers to as when worn)
  - be fitted with webbing adjustment straps at the side edges
- **back** to:
  - consists of two layers of fabric that shall extend along the full width and length of the back
  - be fitted with a laid-on outer material panel centrally positioned in the length
  - be fitted with self-locking buckles to facilitate adjustment
  - fitted with a rescue strap
  - be fitted with a sewn-on embroidered patch with the following: “TMPD”
- webbing adjustment straps at the shoulders
- bound along all free edges

The style and make of the detachable pouches shall be as given in Annex A.

4. Illustrations

Illustrations are not to scale and are for guidance only.

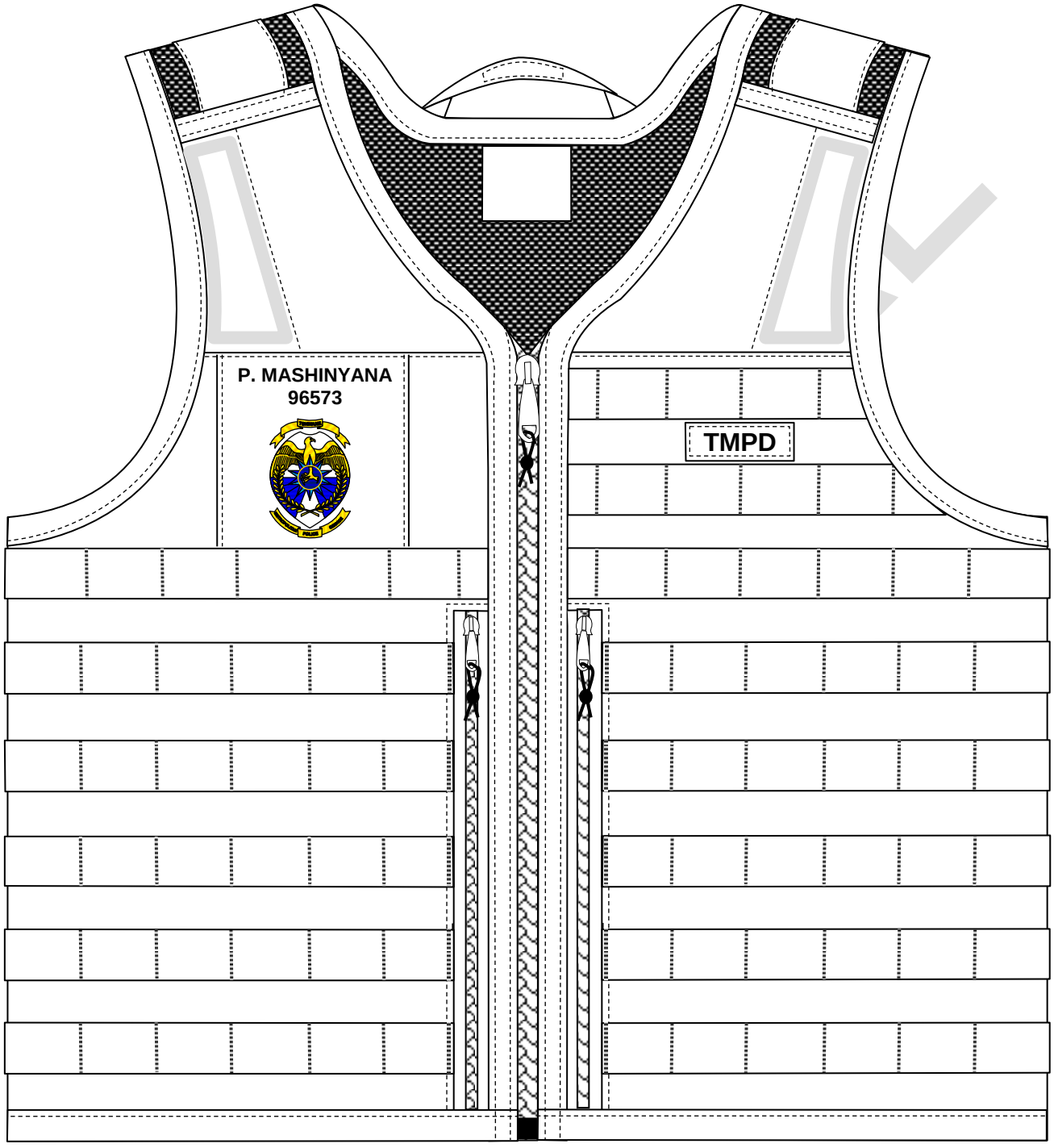


Figure 1 – Front (as when worn)

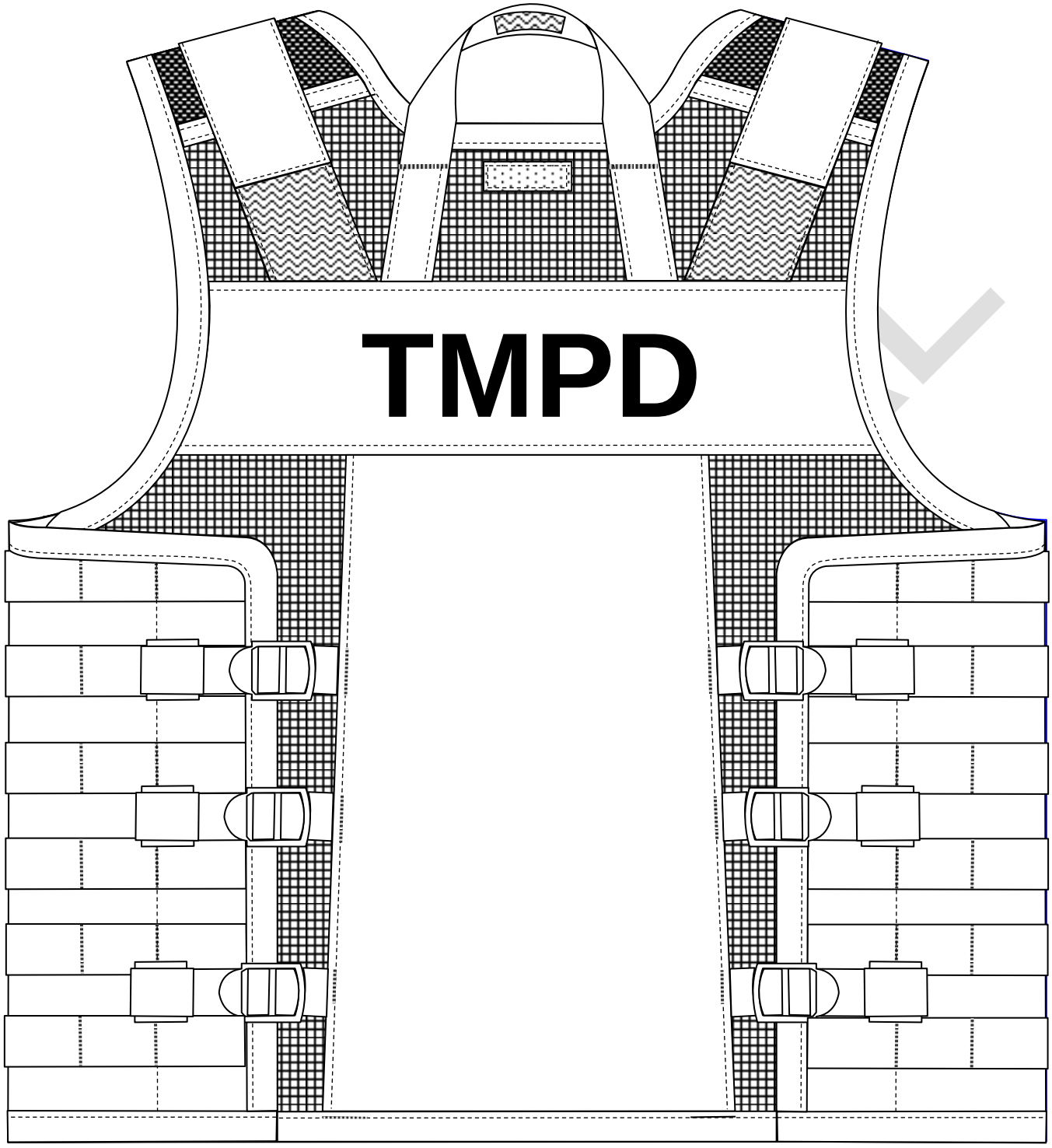


Figure 2 – Back view

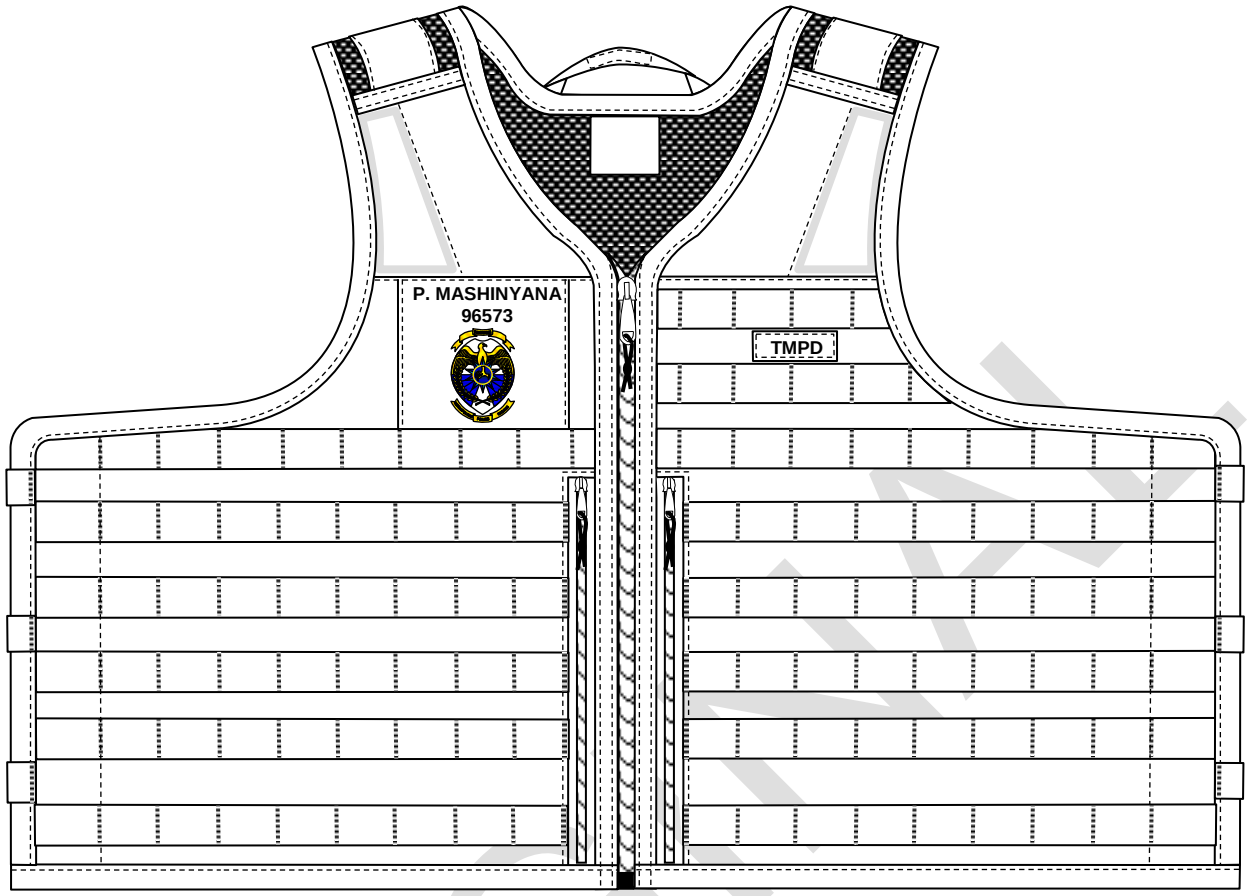


Figure 3 – Front with side adjustment straps not fastened

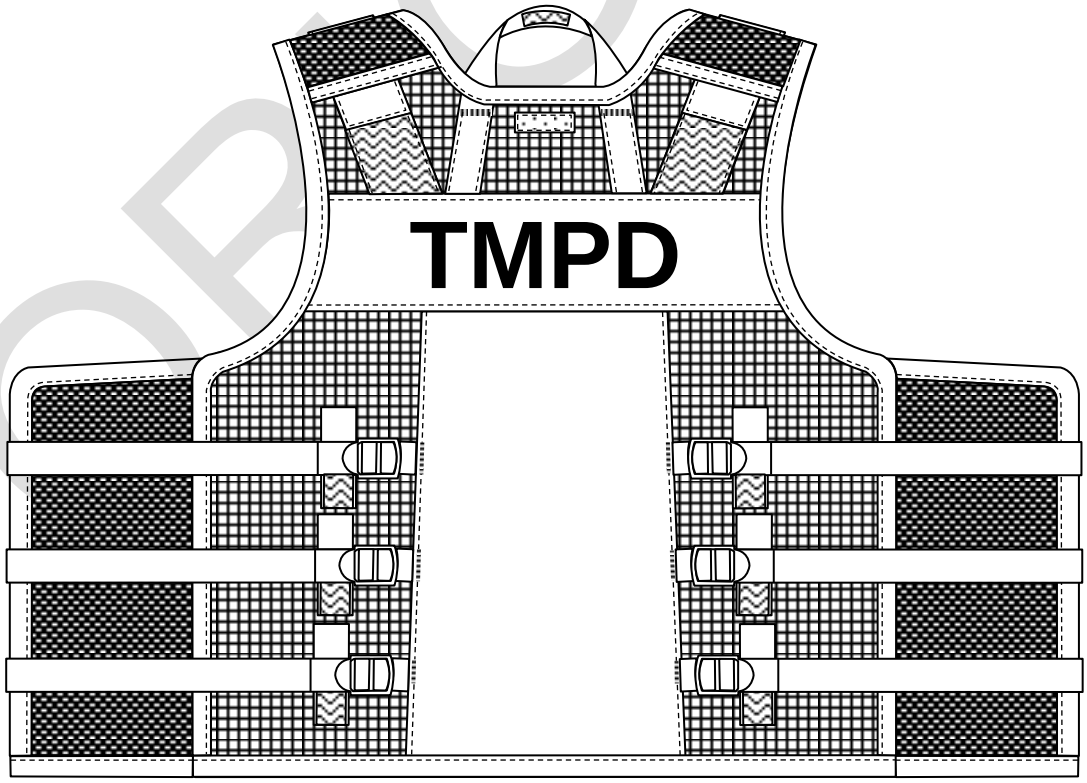


Figure 4 – Back view with side adjustment straps not fastened

5. Client Furnished Materials

No materials will be supplied by the Tshwane Metropolitan Police Department.

The TMPD shall submit a list of names (initials, surname and force number) of the relevant personnel eligible for a jacket. This list shall be applicable to the embroidery done on the right chest. Each name and force number shall correlate with the size of the jacket ordered for each specific member.

6. Component Materials

The following materials shall be supplied and used by the manufacturer. Trim charts shall also be submitted by the manufacturer (see *Annex C*).

6.1 Outer material

- to comply with the requirements as given in table 3
- an acceptable match to colour reference DP 005-2018 "Black (Nylon)" [1]

Table 3 - Outer material requirements

1	2	3
Property	**Requirement**	**ISO number** (unless otherwise indicated)
Fibre composition, %, ...	All polyamide[a]	AATCC method 20
Weave	Plain	Visual examination and physical analysis
Mass per area, g/m^2, min.	320	3801
Tensile strength, N, min.		13934-1
Warp	2 500	
Weft	2 500	
Tearing strength, N, min.		13937-2
Warp	140	
Weft	140	
Dimensional stability at 40 ºC, %, max		SANS 11167[b]
Warp	± 3	
Weft	± 3	
Abrasion resistance, Number of rubs, min.	20 000 No breaks	SANS 6009
Water repellency		4920
Spray rating, min.	**4**	
Colour fastness to:		
Laundering (after 5 cycles), rating, min.		105-C06
Change in colour	4	
Staining	4	
Perspiration (after 2 cycles), rating, min.		105-E04
Change in colour	4	
Staining	4	
Light, rating, min.	5	105-B02

[a] 1000D Cordura® fibres.
[b] Washing procedure F4, IEC test detergent, drying procedure E.

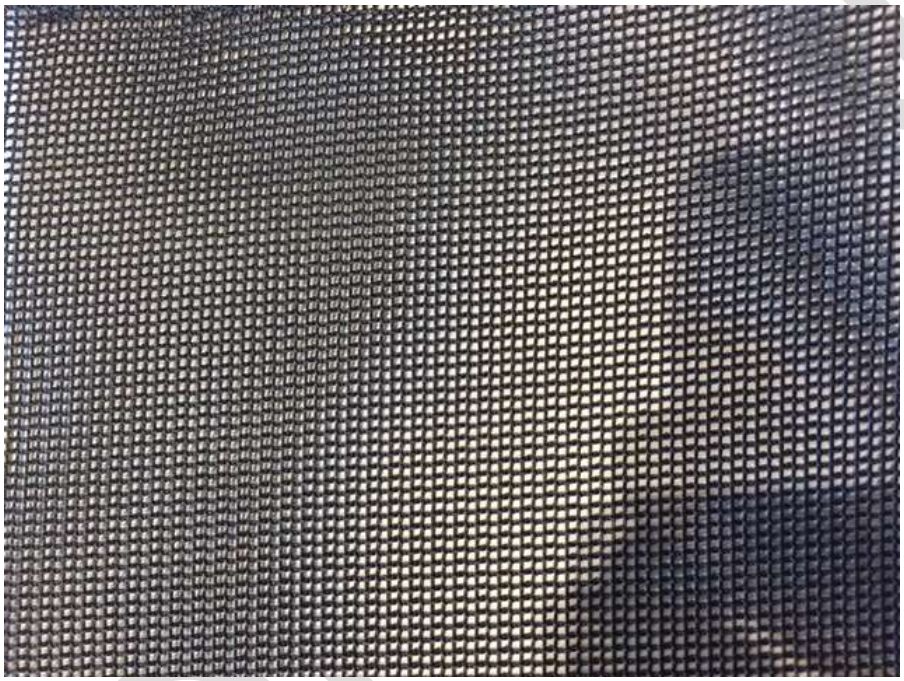
[1] *DP Colour swatches are obtainable from Defcon Protec (www.defconprotec.co.za).*

6.2 Base fabric (also serving as lining)

- an acceptable warp-knitted tricot mesh fabric
- 100% polyester when tested in accordance with AATCC, method 20 “Fiber analysis: Qualitative”
- nominal mass per area of 230g/m^2 when tested in accordance with SANS 5385 “Mass per unit area of conditioned knitted textiles” (fabric is not stiffened)
- given for guidance only: knitting structure to incorporate approximately 72 holes per 5 cm x 5 cm (25 cm^2) cutting
- colour to be an acceptable match to the colour of the outer material (black)

6.3 Stiffened mesh fabric

- an acceptable stiffened warp-knitted mesh fabric (see figure below)
  - stiffness to be such that it shall achieve load bearing performance of the fabric for fitting accessories to the finished garment (see Annex A for guidance on accessories)
- 100% polyester when tested in accordance with AATCC, method 20 “Fiber analysis: Qualitative”
- nominal mass per area of 300 - 330 g/m^2 when tested in accordance with SANS 5385 “Mass per unit area of conditioned knitted textiles” (range makes provision for variances after stiffener finish has been applied)
- colour to be an acceptable match to the colour of the outer material (black)



6.4 Interlining

- an acceptable fusible woven or non-woven interlining
- to comply with the requirements of SANS 1254 “Fusible interlinings”

6.5 Binding tape

- 100% polyester or nylon tape
- to have a herringbone design
- of nominal width 25 mm
- colour to be black

6.6 Touch and close fastener

- to comply with the requirements of SANS 1823 “Touch and close fasteners”
- nominal width 10 cm, 50 mm and 25 mm

- colour to be black

6.7 Self-locking buckles (Ladder-locks)

- acceptable moulded polyamide buckles
- to be such that it shall outlast the garment
- not to become brittle during use
- to be such as to ensure an acceptable grip throughout the lifespan of the tactical jacket
- such that it shall neatly accommodate webbing of nominal width 25 mm
- colour to be black

Figure 5 - Example of typical self-pocking buckles

6.8 Press-stud tape (popper/snapper tape)

- acceptable synthetic knitted tape that incorporates press-studs
- tape to be of nominal width 18 - 20 mm
- tape to incorporate 9 centrally positioned press-stud sections per 20 cm
- plastics press-studs of the male and female type that shall outlast the garment
- female press-stud with nominal inside diameter of the centre hole 3 mm
- colour to be black

6.9 Slide fasteners

- to comply with the requirements of SANS 1822 “Slide fasteners”
- all pullers to have a hole to accommodate the braided cord as specified in 6.10
- colour to be black

a) Front opening

- one-way open-end
- synthetic chain
- comply with the relevant requirements of class D of SANS 1822 “Slide fasteners”

b) Front pocket mouth

- one-way closed end
- comply with relevant requirements of class C slide fasteners of SANS 1822 “Slide fasteners”
- synthetic chain

c) Utility pouch mouth opening (see Annex A)

- two-way closed end
- comply with relevant requirements of class C slide fasteners of SANS 1822 “Slide fasteners”
- synthetic chain

6.10 Braided cord

NOTE: This component will be fitted through the hole in the puller of the relevant slide fastener.

- acceptable synthetic braided cord
- of nominal diameter 4 mm
- colour to be black

6.11 Elastic webbing

- to comply with the requirements for type 1 of SANS 142 “Narrow elastics fabrics and strip”`
- radio pouches: circular and of nominal diameter 4 mm
- shotgun pouch: of nominal width 50 mm
- colour to be black

6.12 Webbing

- to be supplied in four types as given in table 4
- webbing to be able to retain its shape after use
- colour to be black

Table 4 – Webbing requirements

1	2				3
Property	**Requirement**				**SANS number** (unless otherwise indicated)
	Type				
	A	**B**	**C**	**D**	
Composition, %	All continuous filament polyester	All continuous filament polypropylene [a]			AATCC 20
Weave	Pebble				Physical analysis
Selvedge	Lockstitch				
Width, mm	25 ± 1		50 ± 1	35 ± 1	5488
Thickness, mm	1,60 ± 0,10		1,0 ± 0,10		85
Breaking strength, min. kN	14, 8	-	-	-	13934-1
Colourfastness to water, rating, min.					105-E01
Change in colour	4-5				
Staining	4-5				
Light, rating, min.	5-6				105-B02

[a] Yarn linear density for the warp, the warp binder and the weft: 900 denier

6.13 Embroidered patch fabric

- an acceptable polyester-cotton field dress type fabric
- to comply with the colour fastness requirements as specified for the outer material
- colour to be black

6.14 Foam insert

- acceptable high density closed-cell foam
- of nominal thickness 8 mm
- of nominal finished width 25 mm (measured at the top edge)
- of nominal finished width 50 mm (measured at the bottom edge)
- shaped in such a way that it shall conform to the shape of the armhole

6.15 Sewing threads

- to comply with relevant requirements of SANS 1362 “Sewing threads”
- colour to be an acceptable match to the colour of the outer material

Sewing thread:

- continuous filament nylon thread
- ticket No 40

6.16 Embroidery thread

- acceptable 100% viscose machine embroidery thread
- to be supplied in the colours as given in table 5

Table 5 – Colour breakdown of TMPD emblem and embroidered wording

NOTE: *The black colour filled sections refer to the application and position of the specific colour.*

	**Pantone Black**
	**Pantone Cotton Passport colour 14-0756 TCX - " Bright Yellow"** **AND** **Wording on the back, left and right forepart**
	**DP[2] colour reference: DP2603-2018 - "TMPD Royal Blue"**

[2] *DP Colour swatches are obtainable from Defcon Protec (www.defconprotec.co.za).*

Table 5 – Colour breakdown of TMPD emblem and embroidered wording (continued)

	**Pantone Cotton Passport colour 16-4134 TCX – Sky Blue**
	**Pantone White**
	**Background colour of garment**

7. Workmanship

The tactical jackets and pouches shall be:

- cut and made with first-class workmanship throughout
- of uniform and acceptable make, colour and finish

Shall be free from:

- defects, that affect their appearance or may affect their serviceability (or both)
- marks, spots and stains incurred in the making-up

Seams and stitches shall be:

- smooth and uniform and free from twists, pleats and puckers
- sufficiently extensible to avoid seam cracking and undue shrinkage in use

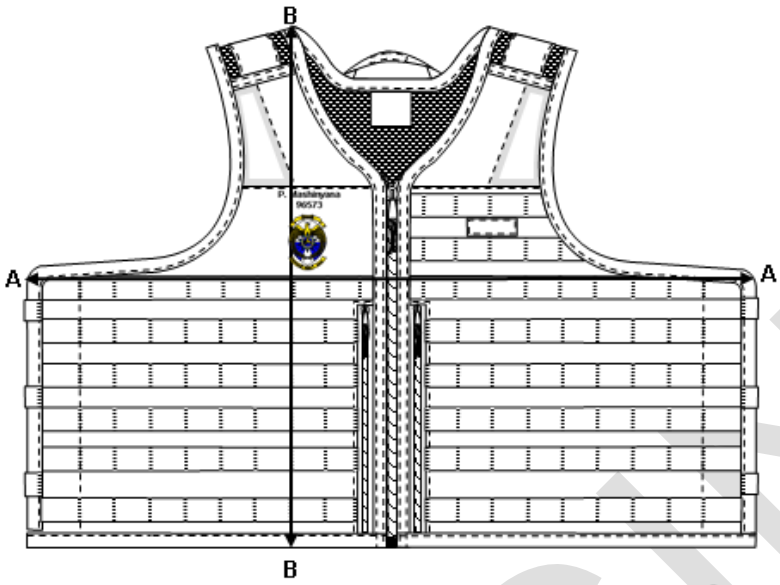
Ends of sewing shall be:

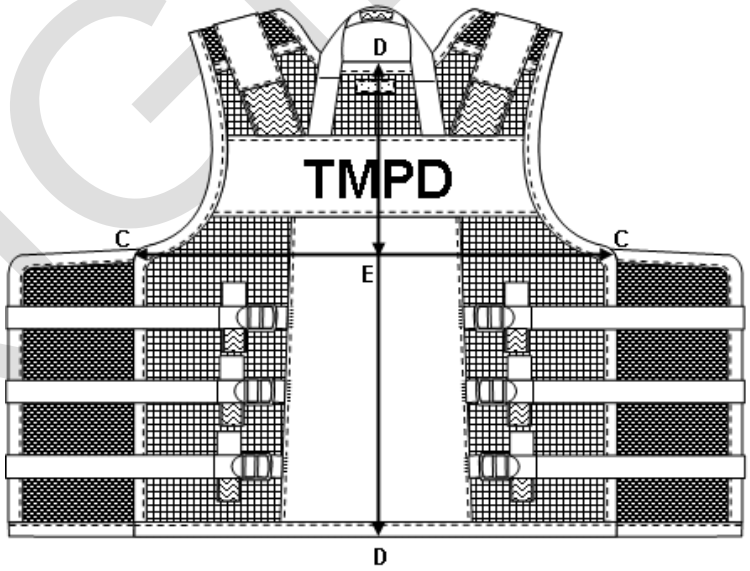
- trimmed and loose threads removed
- back-tacked if unsecured

8. Sizes and dimensions

In addition to the quantities as stipulated in the official order and in addition to the pre-production samples as required in Annex C, the successful bidder shall also supply the following:

- all sizes, i.e. a full fit range, that will be used for fitting purposes (the cost of the fit range shall be included in the bid submission)





MEASURING POINT		DESCRIPTION
A – A	**Chest circumference of fronts**	Measure at the base of the scye, across the width of the fronts with the slide fastener fastened and fronts spread completely flat.
B – B	**Front length**	Measure from the shoulder point to the bottom hem.
C – C	**Chest circumference of back**	Measure at the base of the scye, across the width of the back, with the back spread completely flat.
D – D	**Back length**	Measure from the centre back neck point to the bottom hem.
D – E	**Depth of scye**	Measure from the centre back neck point to a level in line with the base of the scye.

Table 6 – Size range

1	2	3	4	5	6
Size designation [a]	**Nominal finished garment measurements, cm**				
	Front width[b]	**Front length**	**Back[b] width**	**Back length**	**Depth of scye**
Small/Medium	72	58	36	53	25
Large/X-Large	82	63	46	58	27
2X-Large/3X-Large	92	68	56	63	29
4X-Large/5X-Large	102	73	66	68	31

a) Based on the chest circumference of the intended wearer.
b) The front and back width shall have a tolerance of ± 1 cm.

9. Make: Jacket

Illustrations are not to scale and for guidance only, and unless inconsistent with the text, all measurements are nominal.

9.1 General

- the jacket shall consist of three sections
  - two front panels and one back panel
- the jacket shall consist of several layers of fabric
- the base fabric (lining) shall be such that the two fronts and one back are cut in one (without seams)
- all edges shall be bound with binding tape

NOTE 1: All illustrations are based on jackets of size designation Large/X-Large.

9.2 Fronts

Fronts shall:

- consist of three layers of fabric
- have extended sides that shall be cut in such a way that they shall fasten to the back when worn
- have a rounded neckline
- have straight bottom edges
- be fitted with:
  - horizontal webbing strips along the full width and length of the fronts
  - vertical pockets along the front edges
  - an embroidered patch on the left front (refers to when worn)
  - touch and close fastener patches positioned on the right front (refers to when worn)
  - webbing adjustment straps at the side edges
  - a stringer of a slide fastener
  - foam inserts at the outer armholes

9.2.1 Front outer material layer

- of outer material fabric
- fully interlined with a layer of stiffened mesh fabric
- laid on top of the base fabric (lining)
- outer material layer and stiffened mesh fabric layer shall be sewn together along the side edges of the fronts and the stitching shall be positioned 40 mm in from the side edges
- such that in width it shall extend from the front edge to the side edge of the jacket
- such that in length it shall extend from the bottom hem to 40 mm below the natural shoulder line
  - the raw top edges of the outer material layer and stiffened mesh fabric layer (shoulder seams) shall be covered with binding tape that shall extend from the armhole to the neck opening
- consist of two sections, i.e. yoke section and body section
  - bottom seam of the yoke section shall be positioned approximately 90 mm above the base of the scye
  - yoke section to be fitted with a foam insert
    - foam insert to be such that it shall conform to the shape of the armhole
    - foam insert to extend from the shoulder seam to the bottom edge of the yoke
    - kept in position by a stitching that shall extend along the full length of the yoke and adjacent to the foam insert (stitching to penetrate outer material layer and stiffened mesh fabric layer)
    - sandwiched between the outer material layer and the stiffened mesh fabric layer

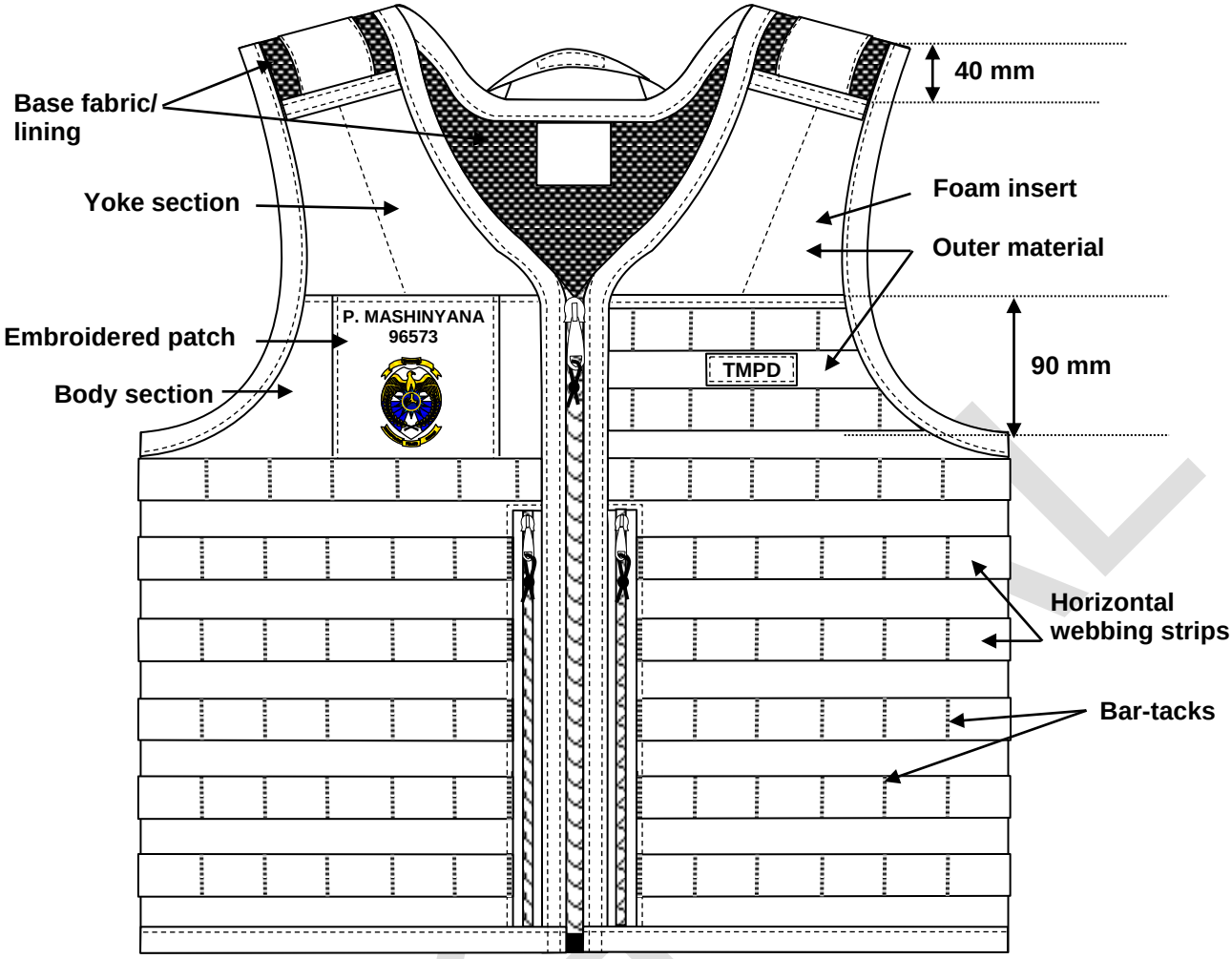


Figure 6(a) – Identification of components on front

9.2.2 Horizontal webbing strips

- laid on top of outer material layer
- type B webbing
- to extend from the front edges to the outer side edges
- raw edges to be covered with binding along the outer edges of the jacket
- attached to the fronts by means of several vertical bar-tacks along the full length of each strip
  - bar-tacks to be spaced at 40 mm intervals
  - bar-tacks to penetrate the outer material layer only (NOT the stiffened mesh layer)
  - bar-tacks to extend along the full depth of the strips
- left front to be fitted with eight webbing strips **on size designation Large/X-Large**
  - positioned with the top strip approximately 5 mm below the yoke seam
  - remaining seven strips to be equidistantly spaced at 25 mm intervals
- right front to be fitted with six webbing strips **on size designation Large/X-Large**
  - topmost webbing strip on the right front to be aligned with the third webbing strip (from the top) on the left front
  - remaining five strips shall be in corresponding positions to the webbing strips on the left front

NOTE: The total amount of webbing strips shall vary depending on the size of the jacket. Intervals of 25 mm shall be kept between the strips on all sizes.

9.2.3 Front pockets (integrated part of jacket)

- to be vertical
- mouth openings to be positioned adjacent to the binding along the front edges
- left front: mouth opening to extend from the bottom edge of the third webbing strip (from the top) to the bottom hem

- right front: mouth opening to extend from the bottom edge of the topmost webbing strip to the bottom hem
- mouth opening to be fitted with a slide fastener
  - puller of slide fastener to be positioned at the top when it is closed
  - puller to be fitted with a length of cord to facilitate easy-opening of slide fastener
    - of finished length 50 mm (after being folded double)
    - ends to be knotted and heat-sealed to prevent fraying
- mouth opening shall provide access to the pocket which shall be formed by the outer material layer and the stiffened mesh fabric layer

9.2.4 Front opening

- to be fitted with a slide fastener
- to extend from the top edge at centre front to the bottom hem of the jacket
- stringers to be positioned behind the bound front edges and stitched down with two rows of stitches on each front
- puller of slide fastener to be positioned at the top when it is closed
- puller to be fitted with a length of cord to facilitate easy-opening of slide fastener
  - of finished length 50 mm (after being folded double)
  - ends to be knotted and heat-sealed to prevent fraying

9.2.5 Right front embroidered patch

- of embroidered patch fabric
- dimensions to be such as to neatly accommodate the embroidered design
- top edge of patch to be sewn in with the yoke-to-body-seam and bottom edge be covered by the topmost horizontal webbing strip
- patch to be centred on the front
- edge-stitched 2 mm along the side and bottom edges
- embroidered with embroidery thread as given in table 5
- embroidered with the registered TMPD emblem, with head of eagle facing left (refer to as when worn, see figure 6(b))
- the initials, surname and force number of each relevant staff member shall be embroidered above the TMPD emblem
  - centrally positioned on the patch
  - all letters shall be in capital letters
  - letters to be equidistantly spaced and of approximate height 8 mm
  - letters to be neat, clear and legible
  - Arial font
  - centred above the TMPD emblem
  - TMPD emblem to be of approximate height 77 mm and width 62 mm, but may be reduced in size on the smaller sizes if it does not fit into the allocated space

9.2.6 Left front embroidered patch

- to be of embroidered patch fabric
- fully interlined with interlining
- to be of finished width 20 mm
- to be of finished length 62 mm
- embroidered with embroidery thread
  - the letters “TMPD” shall be in capital letters
  - letters to be equidistantly spaced at approximate 2 mm intervals
  - letter height to be 12 mm
- positioned on the left front (refers to when worn)
- centrally positioned between the topmost and second horizontal webbing strip
- positioned 70 mm from the front edge (measurement excludes the stringer of the slide fastener)
- sewn along all edges
- edges to be finished off in such a way that it shall not fray

Figure 6(b) – Identification of components on front

9.2.7 Side adjustment straps

- of type B webbing and of finished length 25 cm
- folded in raw edges and bar-tacked to the side edges of the front
- three equidistantly spaced straps on each side edge
- adjustment straps shall be positioned between the horizontal webbing strips of the front
- spaced in such a way that it shall ensure functionality when fastened
- free edge to be threaded through one bar of the self-locking buckle positioned on the back (see fig. 7 and 8)
  - after the free edge has been threaded through the bar, it shall be turned in 30 mm and bar-tacked at the edge
  - a male and female section of touch and close fastener (width 25 mm) shall be sewn to the turned-in section which shall serve as a fastening mechanism to keep the webbing adjustment straps in place when the correct setting has been determined
  - raw edge of webbing to be heat-sealed along the raw edge to prevent fraying

NOTE: The adjustment straps can be adjusted in length, but cannot be fully detached from the buckles on the back.

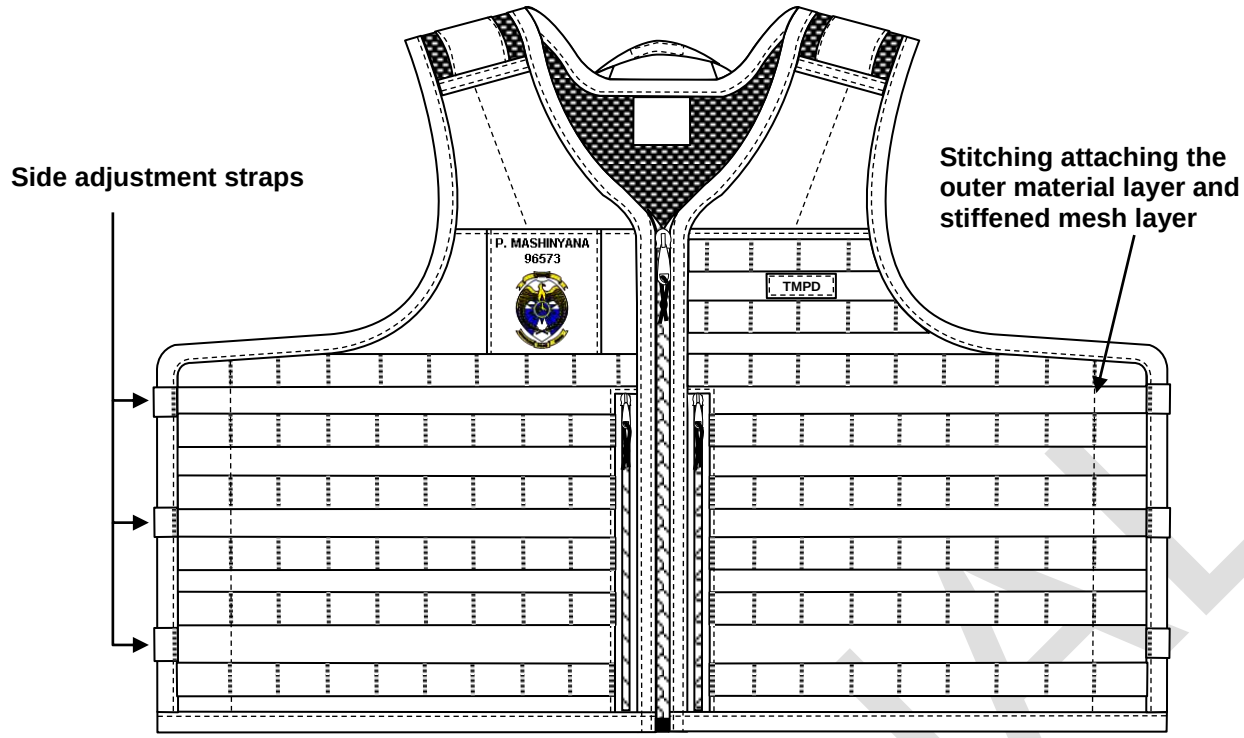


Figure 7 – Side adjustment straps

9.3 Back

Each back shall:

- consist of two layers of fabric
  - stiffened mesh fabric shall be positioned on the face side of the back
  - base fabric shall serve as lining
- be designed in such a way that the front panels shall overlap the back at the side edges
- have a back width of 36 cm on size designation Large/X-Large
  - when measured in the centre of the scye
  - graded proportionally on smaller and larger sizes
- have straight bottom edges
- be fitted with:
  - a laid-on outer material panel centrally positioned in the length
  - self-locking buckles to facilitate side adjustment
  - a rescue strap
  - a horizontally positioned male patch of touch and close faster below the back neck (for securing the loop of the rescue strap)
  - two female touch and close fastener sections at the shoulders (for shoulder adjustment)
  - fitted with an embroidered patch as given in 9.3.4
- the following components shall be layered according to the following sequence (as given from the inside to the face side of the jacket):
  - base fabric (lining)
  - stiffened mesh fabric
  - rescue strap
  - back outer material panel
  - embroidered patch

9.3.1 Stiffened mesh layer

- laid on top of the base fabric
- such that it shall extend along the full width of the back of the jacket
- such that in length it shall extend from the bottom hem to 20 mm below the natural shoulder line
  - the raw top edges of the stiffened mesh layer (shoulder seams) shall be bound with binding tape that shall extend from the armhole to the neck opening

9.3.2 Rescue strap

- of Type A webbing
- a continuous length of webbing
- bottom raw edges to be sewn in with the binding along the bottom edge of the back
- positioned behind and aligned with the side edges of the back outer material panel, forming a loop at the top edge of the back
- bar-tacked 25 mm below the neck opening
  - loop forming between the bar-tacks shall be of finished length 20 cm
  - on the underside, the loop shall be fitted with a female length of touch and close fastener (25 mm wide)
  - touch and close fastener to be of finished length 60 mm and sewn along all edges
- rescue strap to be sewn along the side edges to the stiffened mesh layer (up to the bar-tacks)
- a male section touch and close fastener shall be sewn to the back (stiffened mesh layer)
  - 25 mm below the centre back neck point
  - of length 60 mm
  - to correspond with the position of the female section of the rescue strap loop
  - sewn along all edges

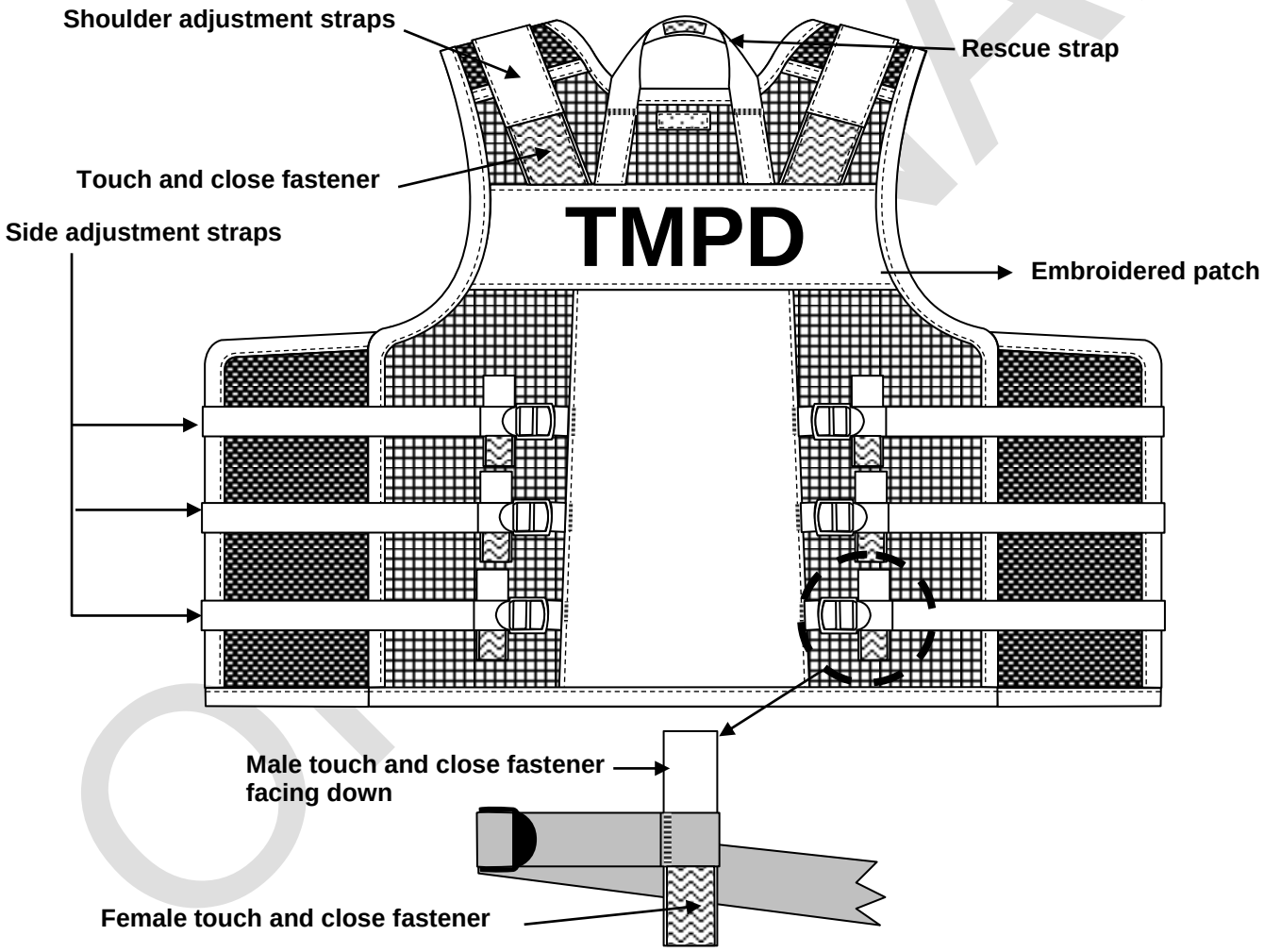


Figure 8 – Side adjustment straps

9.3.3 Back outer material panel

- of outer material fabric
- laid on top of the stiffened mesh fabric
- to extend from the bottom hem of jacket to the bottom edge of the embroidered patch at the back (top raw edge to be positioned behind the embroidered patch/female touch and close fastener of detachable patch)
- centrally positioned in the back
- of finished width 21 cm (measured at the bottom edge), tapering to 17 cm at the top edge
  - on size designation Large/X-Large and graded proportionally on smaller and larger sizes
- side edges to be turned in 10 mm and stitched down onto the stiffened mesh fabric layer

9.3.4 Back embroidered patch

- to be of embroidered patch fabric and fully interlined with interlining
- embroidered with embroidery thread as given in table 5
  - "TMPD" shall be in capital letters
  - letters to be equidistantly spaced at 10 mm intervals
  - letter height to be 50 mm
  - centrally positioned in the width and length of the patch
- extend from the one armhole to the other
  - raw side edges to be sewn in with the binding along the armholes
- to be of finished depth 80 mm
- positioned with the top edge of the patch 11 cm below the centre back neck opening
- top and bottom edges to be finished off in such a way that it shall not fray
- sewn down along the top and bottom edges

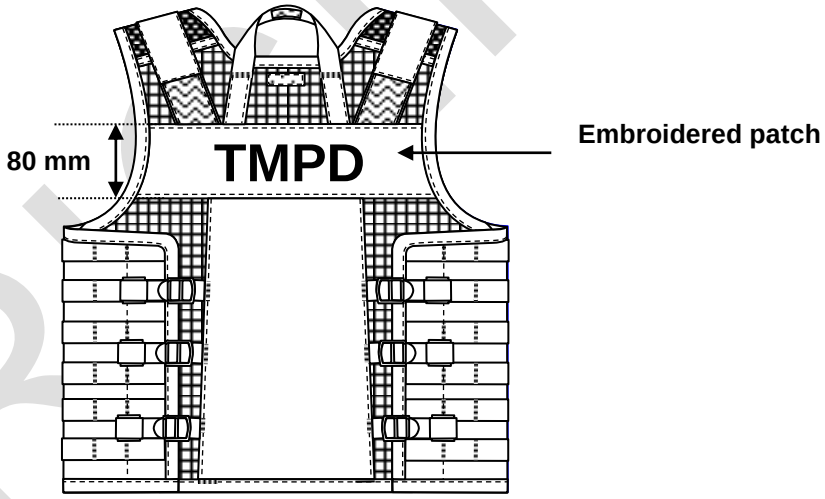


Figure 9 – Back

9.3.5 Buckle attachments

- self-locking buckles to be attached to webbing loops (type B webbing)
- free edge of webbing to be threaded through the one bar of the self-locking buckle
- double folded webbing to be of finished length 25 mm
- in corresponding positions to the adjustments straps on the side edges of the fronts
- raw edges of the webbing loops shall be positioned behind the back outer material panel and bar-tacked along the full depth of the webbing

9.3.6 Shoulder touch and close fastener

- female sections (50 mm)
- top edges to be sewn in with the back shoulder seam
- sewn to the stiffened mesh fabric layer
- bottom edges to be positioned behind the back embroidered patch
- in corresponding positions to the male sections on the shoulder adjustment straps (see 9.4)
- sewn along the side edges

9.4 Shoulder adjustment straps

- of Type C webbing
- of finished length 14 cm
- backed (lined) with male touch and close fastener
  - of finished length 10 cm
  - positioned at the free edge of the webbing strap
  - sewn along all edges
- free edges to be folded in and sewn down
- sewn in with the shoulder seam on the front

10. Stitches, Seams and Stitchings

10.1 Stitches

all stitches: single needle lock stitch

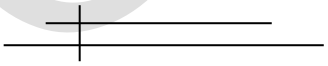
10.2 Seams

Seams shall be as follows:

Attaching binding: seam type BSa

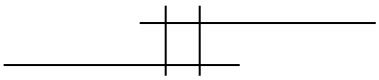
Fold a binding strip round the edge of a ply or plies of material and seam with the appropriate number of rows of stitches.

Attaching touch and close fastener to jacket, embroidered front patches and embroidered back patch: seam type SSau



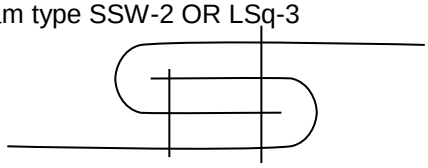
Superimpose a strip on a ply of material and seam with the appropriate number of rows of stitches.

Attaching front slide fastener: seam type LSa-2

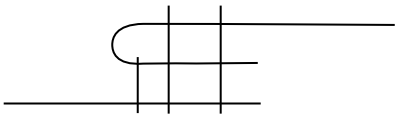


Lap the edges of two or more plies of material for the specified distance and seam with the appropriate number of rows of stitches.

Body-to-yoke seam: seam type SSW-2 OR LSq-3



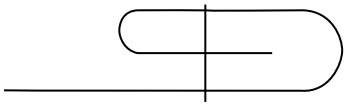
Form seam Type SSbc-1. Then turn back the upper ply over the seamed edge and seam with one row of stitches.



Form seam Type SSa-1, using two plies of material. Then turn back the top ply at the seam and seam with the appropriate number of rows of stitches.

10.3 Stitchings

Mouth hems of pouches B, C, D, G, J and K: stitching type EFb-1



Turn in the specified width at the edge of a ply of material, fold back the turned edge, and stitch the turned-in and folded portion with the appropriate number of rows of stitches.

10.4 Number of stitches

The determination of sewing stitches per unit length will be done in accordance with SANS 5278 "Sewing stitches per unit length"

All seams and top-stitching: 40 ± 4 per 10 cm

11. Care-labelling and marking

11.1 Label properties

All labels shall:

- be white woven fabric labels that are printed
- comply with SANS 1309 " Printed labels for textiles"
  - information to be in legible and indelible block letters of height at least 3 mm
- permanently secured
- be such that they outlast the garments and pouches (including the markings)

11.2 Care-labelling

- each garment and pouch shall have a label that provides correct and appropriate care instructions (in accordance with SANS10011 "Care-labelling of textile piece-goods, textile articles and clothing")
- each label to include the composition of the main fabric in accordance with the requirements of SANS 10235 "Fibre-content labelling of textiles and textile products"

11.3 Marking

- Each jacket shall have, centrally positioned on the inside at the back of the neck and sewn in with the binding, a label that provides the following information:

  - the size designation
  - the manufacturer's name
  - the manufacturer's trade mark (where applicable)
  - the year of manufacture
  - the country of origin, i.e. "Made in RSA"
  - the VAT No of the contractor

- Each pouch shall have, positioned on the inside and not visible when in use, a label that provides the following information:

  NOTE: In instances where it is not feasible to attach a label, it might be omitted (as agreed upon between the TMPD and the supplier):

  - the manufacturer's name

- the manufacturer's trade mark (where applicable)
- the year of manufacture
- the country of origin, i.e. "Made in RSA"
- the VAT No of the contractor

12. Packaging and marking

12.1 Packing

12.1.1 The jacket shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- individually packed in a plastics envelope of suitable size and shape
  - unless otherwise specified in the order or contract, acceptably packed (in units of 10) for transit in acceptable bulk containers

12.1.2 The pouches shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- individually packed in a plastics envelope of suitable size and shape
  - unless otherwise specified in the order or contract, acceptably packed (in units of 10) for transit in acceptable bulk containers

12.1.3 Pouches:

- of the same type to be packed together in a bulk container

12.2 Marking

12.2.1 Plastics envelopes

Each plastics envelope to be clearly marked with the following:

- the item description
- the size designation (applicable to jackets only)
- the wearer's name and force number (applicable to jackets only)

12.2.2 Bulk containers

Each bulk container shall have a label securely attached to the outside. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the manufacturer's name or trade mark or both
- the order number or contract number
- the item description (designation)
- the quantity of the item
- the year of manufacture
- a list of all the intended wearers' names with accompanying force numbers (relevant to jackets)
- the batch number
- the number of boxes per consignment, e.g. 1 of 10 boxes

In addition to the above, a duplicated list of the wearers' names (and force numbers) shall be placed on the inside of the bulk container.

12.3 Additional marking

When so required by the Tshwane Metropolitan Police Department, jackets, pouches, envelopes or containers (or any combination of these) to bear information additional to that specified above.

13. Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this specification. All documents are subject to revision and, since any reference to a document is deemed to be a reference to the latest edition of that document, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the documents indicated below. Information on currently valid national, international and CKS documents may be obtained from SABS Standards Division[3].

AATCC method 20, *Fiber analysis: Qualitative.* Available from World Wide Web http://www.aatcc.org/Technical Test_Methods/scopes/tm20.cfm

CKS 129, *Colours for textiles.*

ISO 3801, *Textiles -- Woven fabrics -- Determination of mass per unit length and mass per unit area.*

ISO 4920, *Textile fabrics – Determination of resistance to surface wetting (spray test).*

ISO 13934-1, *Textiles -- Tensile properties of fabrics -- Part 1: Determination of maximum force and elongation at maximum force using the strip method.*

ISO 13937-2, *Textiles -- Tear properties of fabrics -- Part 2: Determination of tear force of trouser-shaped test specimens (Single tear method).*

SANS 85, *Thickness of wool fabrics.*

SANS 105-B02/ISO 105-B02, *Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*.

SANS 105-E01/ISO 105-E01, *Textiles – Tests for colour fastness – Part E01: Colour fastness to water.*

SANS 105-C06/ISO 105-C06, *Textiles -- Tests for colour fastness -- Part C06: Colour fastness to domestic and commercial laundering.*

SANS 105-E04/ISO 105-E04, *Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration.*

SANS 142, *Narrow elastic fabrics andstrip.*

SANS 1254, *Fusible interlinings.*

SANS 1309, *Printed labels for textiles.*

SANS 1362, *Sewing threads.*

SANS 1822, *Slide fastener.*

SANS 1823, *Touch and close fasteners.*

SANS 5278, *Sewing stitches per unit length.*

SANS 5385, *Mass per unit area of conditioned knitted textiles.*

SANS 5488, *Width of ribbons and other narrow fabrics.*

SANS 6009, *Abrasion resistance of textile fabrics (Martindale test).*

SANS 10011, *Care-labelling of textile piece-goods, textile articles and clothing.*

[3] ***SABS: Tel. +27 (0) 12 4287911; www.sabs.co.za***

SANS 10235, *Fibre-content labelling of textiles and textile products.*

SANS 10371, *Terms and definitions for clothing.*

SANS 11167, *Textiles – Dimensional stability during domestic washing and drying procedures.*

SANS 13934-1/ISO 13934-1, *Textiles – Tensile properties of fabrics – Part 1: Determination of maximum force and elongation at maximum force using the strip method.*

ANNEX A

(Normative)

Detachable pouches

A.1 SCOPE

This Annex covers the design and make of eleven different types of interchangeable pouches that are designed to be attached to the tactical jacket as given in this specification.

A.2 GENERAL

The dimensions of the pouches in annex A shall serve as a guideline. It shall be the responsibility of the supplier to ensure that the actual dimensions of the pouches are such that they shall neatly accommodate the items for which the pouches were intended.

The pouches shall be supplied as given in the order or contract and the different types shall be as given in Table A_1.

Table A_1: Types of pouches

Pouch Identification	
Type	**Description**
A	Utility pouch
B	R5-magazine pouch
C	9mm-magazine pouch
D	Pepperspray pouch
E	Orca radio pouch
F	Tetra radio pouch
G	R1-magazine pouch
H	Shotgun ammunition pouch
I	Cable pouch
J	Smoke/grenade/stun gun pouch
K	LED pouch

A.3 POUCHES: MAKE

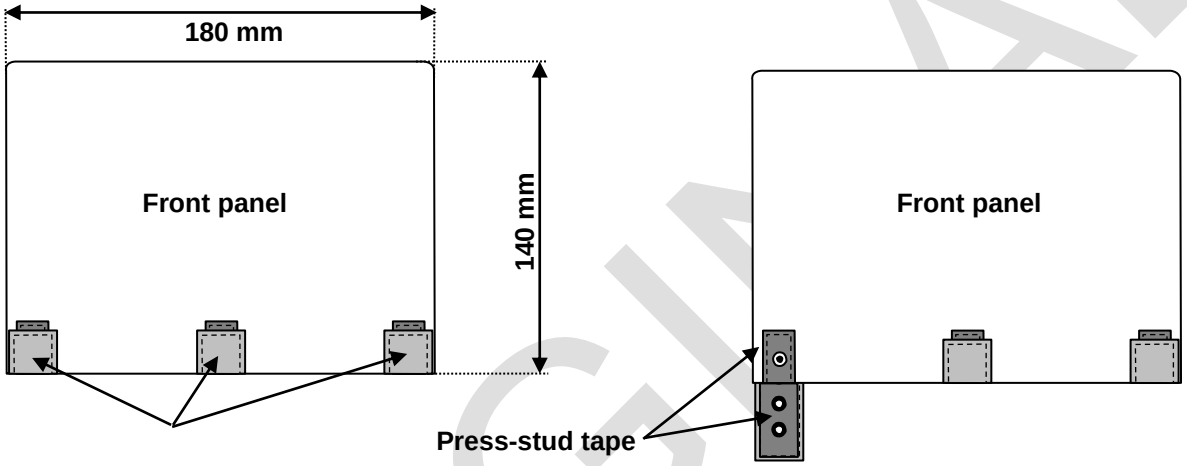
A.3.1 Type A: Utility pouch

- of outer material
- to consist of :
  - front panel (incorporating the base of the pouch)
  - back panel
  - two side panels
  - a top panel (incorporating a slide fastener)
- all seams to be bound with binding on the inside
- top panel to be fitted with a slide fastener
  - puller to be fitted with a length of cord that is knotted and heat-sealed
- fitted with three webbing straps
  - type B webbing
  - of finished length 20 cm
  - free edges to be heat-sealed
  - sewn in with the upper seam of the back panel
  - one length to be centrally positioned
  - two other lengths to be equidistantly spaced from the centre webbing
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm

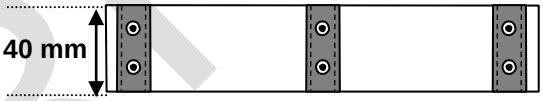
- containing three equidistantly spaced male press-studs
- sewn along all four edges
- attached to the inside of the webbing straps

- bottom edge of pouch to be fitted with three sewn-down sections of press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced female press-studs
  - bottom edge to be sewn in with the bottom seam of the front panel (base)
  - in corresponding positions to the male sections attached to the three webbing straps

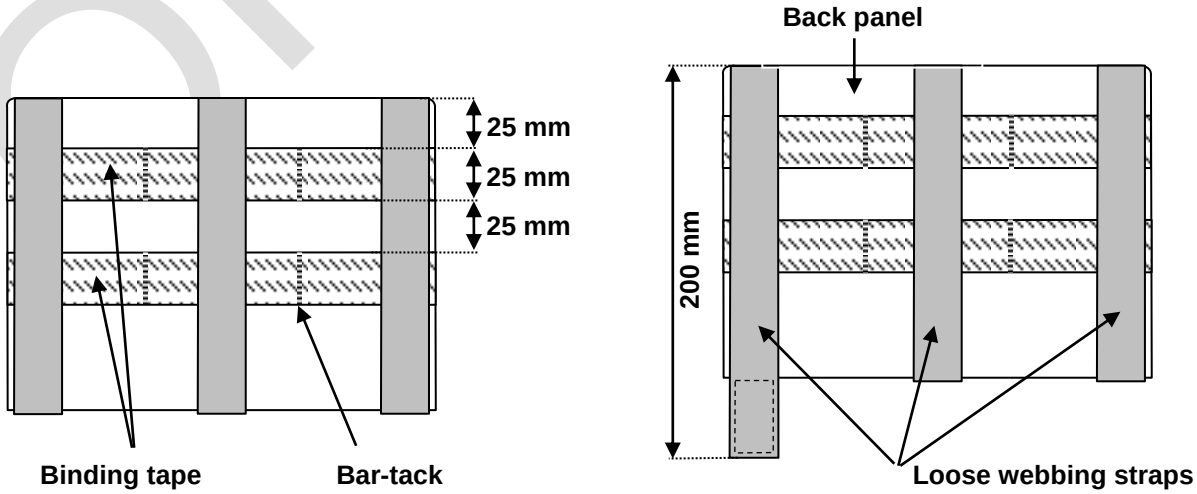
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 40 mm above the bottom seam of the back panel
  - each be bar-tacked with two vertical bar-tacks
    - along full depth of binding tape
- to comply with the dimensions and shape as given in figures A-1 to A-5



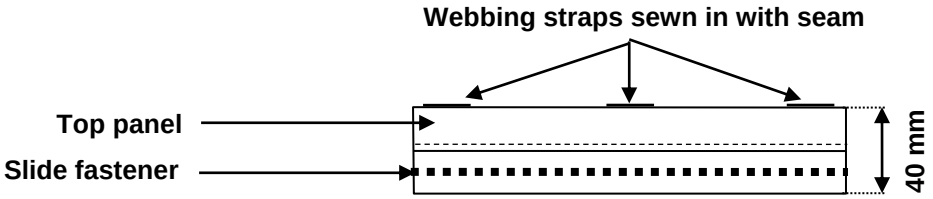
A-1: Front view



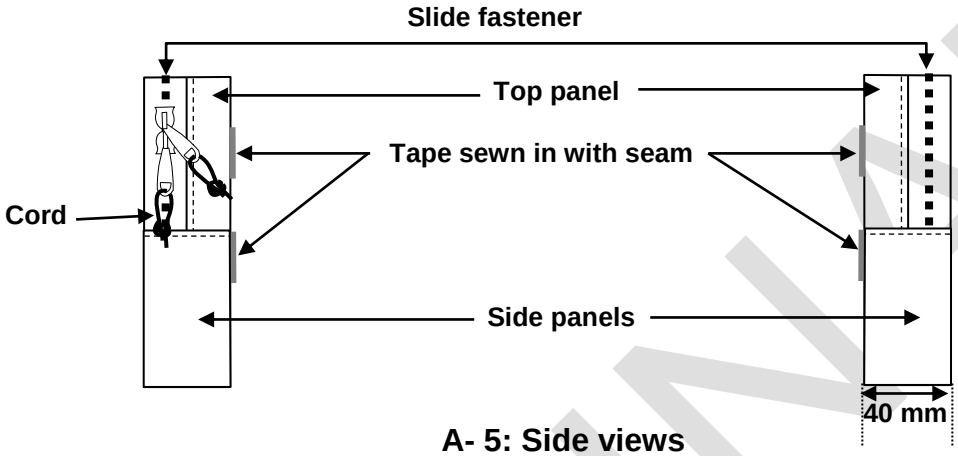
A-2: Base of pouch (a continuation of the front panel)



A- 3: Back view



A- 4: Top view



A- 5: Side views

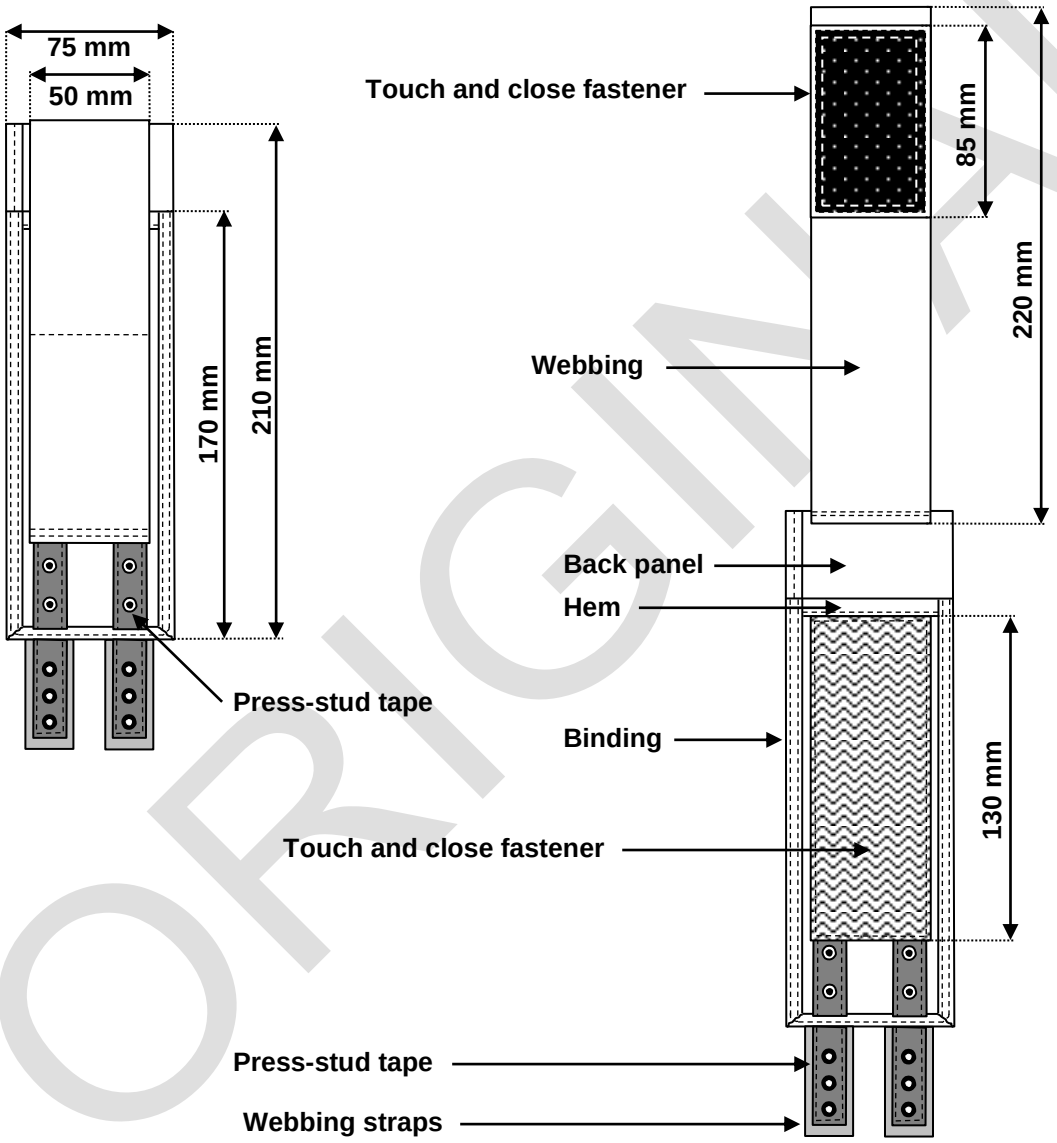
A.3.2 Type B: R5-magazine pouch

- of outer material
- to consist of a front panel and a back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 30 mm
- back panel to be of double folded outer material
- front panel to have a hem of finished width 10 mm
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 50 mm
  - of finished length 13 cm
  - centrally positioned in the length of the front panel
- fitted with a length of webbing
  - of finished length 22 cm, extending from 10 mm below the top edge of the back panel
  - type C webbing
  - centrally positioned and sewn to the inside of the top edge of the back panel
  - raw edges to be heat-sealed
  - free edges to be turned-in and sewn down
  - free end to be fitted with touch and close fastener
    - male section
    - of length 85 mm
    - sewn along all four edges
    - positioned 10 mm from the free edge

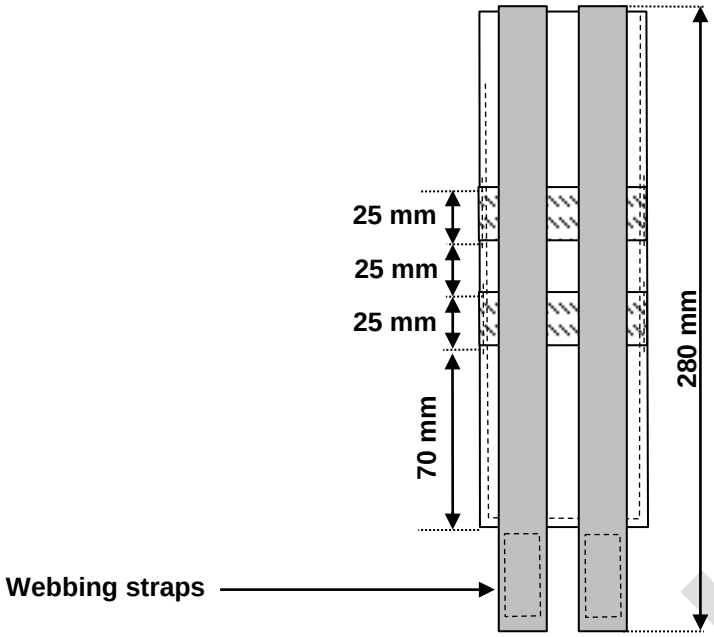
- fitted with two type B webbing straps
  - each of finished length 29 cm, extending from 10 mm below the inside top edge of the back panel
  - free edges to be heat-sealed
  - positioned next to each other (in centre)
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

- bottom edge of pouch to be fitted with two sewn-down sections of press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced male press-studs
  - bottom edge to be sewn in with the bottom seam of the front panel
  - in corresponding positions to the female sections attached to the two loose webbing straps

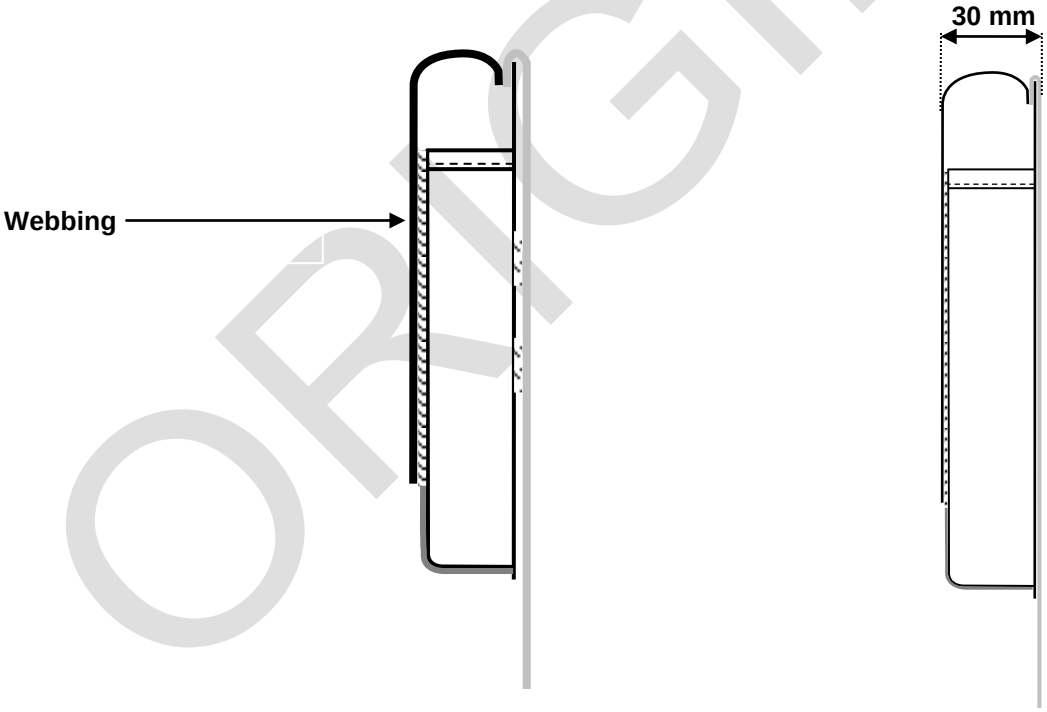
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 70 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures B-1 to B-3



B-1: Front view



B-2: Back view



B-3: Side view

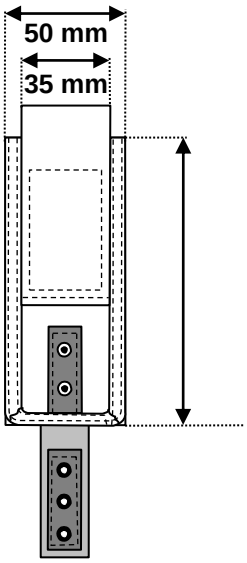
A.3.3 Type C: 9mm magazine pouch

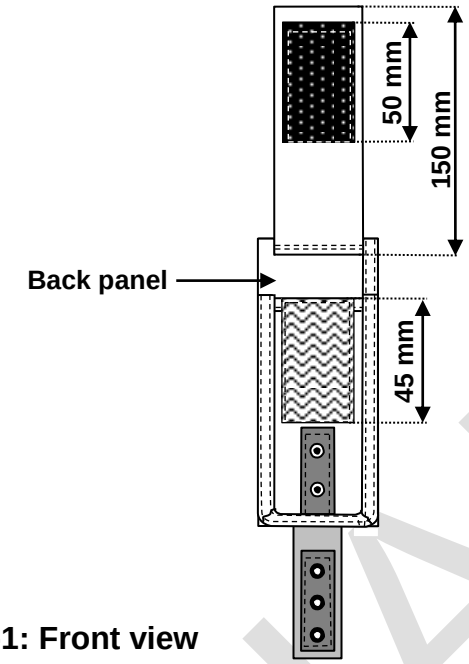
- of outer material
- to consist of a front panel and a back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 30 mm
- back panel to be of double folded outer material
- pocket mouth to have a hem of finished width 10 mm
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 25 mm
  - of finished length 50 mm
  - centrally positioned in the length of the front panel
- fitted with a length of type D webbing
  - of finished length 15 cm (extending from 10 mm below the top edge of the back panel)
  - centrally positioned and sewn to the top edge of the back panel
  - raw edges to be heat-sealed
  - free edges to be turned-in and sewn down
  - free end to be fitted with touch and close fastener
    - male section
    - of length 50 mm
    - sewn along all four edges
    - positioned 10 mm from the free edge

- fitted with a single type B webbing strap
  - of finished length 20 cm
  - extending from 10 mm below the top edge of the back panel
  - free edges to be heat-sealed
  - sewn to the top edge of the back panel
  - free end to be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

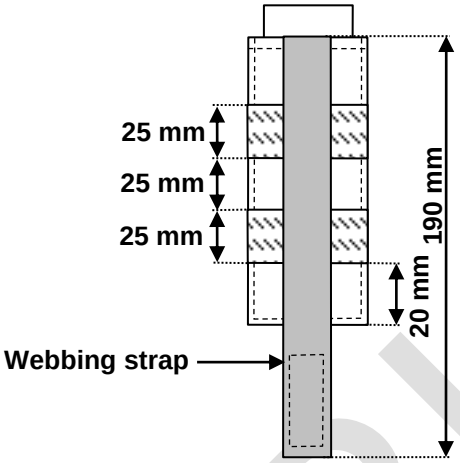
- bottom edge of pouch to be fitted with sewn-down press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced male press-studs
    - bottom edge to be sewn in with the bottom seam of the front panel
    - in corresponding positions to the female sections attached to the narrow webbing strap

- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 20 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures C-1 to C-3

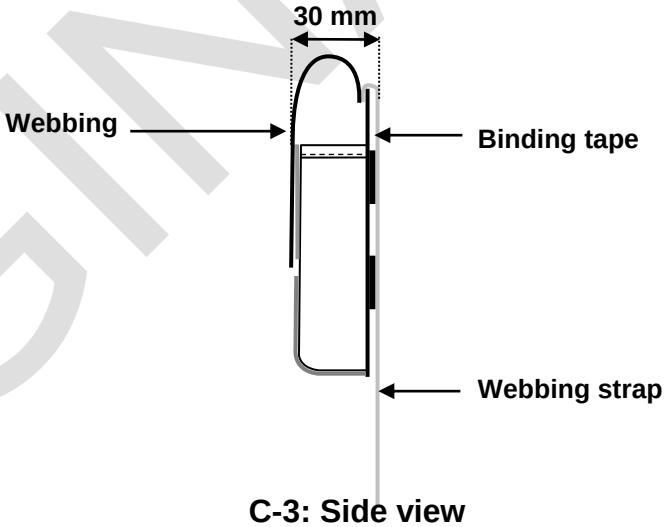




C-1: Front view



C-2: Back view



C-3: Side view

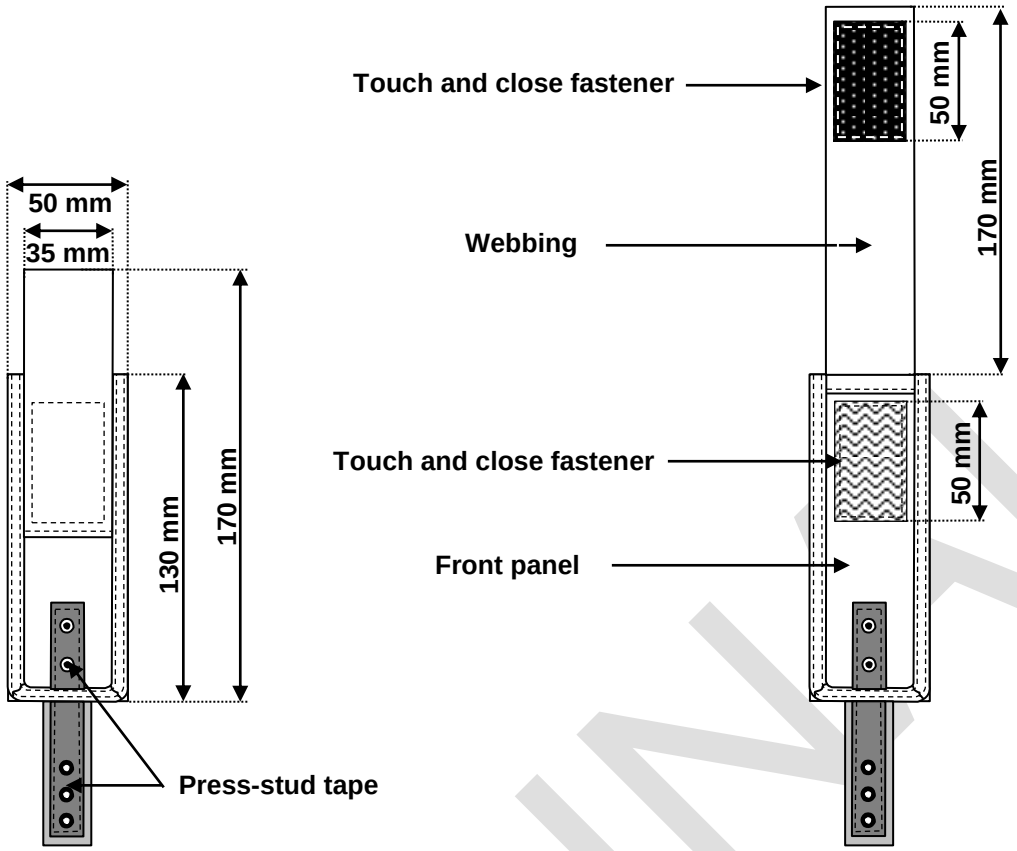
A.3.4 Type D: Pepperspray pouch

- of outer material
- to consist of a front panel and a back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 30 mm
- back panel to be of double folded outer material
- front panel to have a hem of finished width 10 mm
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 40 mm (type C webbing sewn horizontally)
  - of finished length 50 mm
  - centrally positioned below the top edge of the front panel
- fitted with a length of type D webbing
  - of finished length 19 cm (to extend from 20 mm below the top edge of the back panel)
  - centrally positioned and sewn to the inside of the top edge of the back panel
  - raw edges to be heat-sealed
  - free edges to be turned-in and sewn down
  - free end to be fitted with touch and close fastener
    - male section
    - of length 50 mm
    - sewn along all four edges
    - positioned 10 mm from the free edge

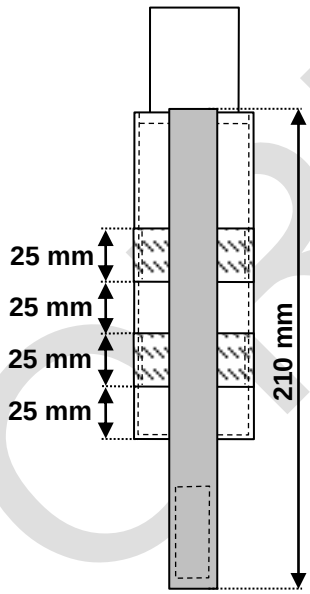
- fitted with a single type B webbing strap
  - of finished length 23 cm, extending from 20 mm below the top edge of the back panel
  - free edges to be heat-sealed
  - centrally positioned and sewn to the inside of the top edge of the back panel
  - free end to be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

- bottom edge of pouch to be fitted with sewn-down press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced male press-studs
    - bottom edge to be sewn in with the bottom seam of the front panel
    - in corresponding positions to the female sections attached to the narrow webbing strap
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 25 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures D-1 to D-3

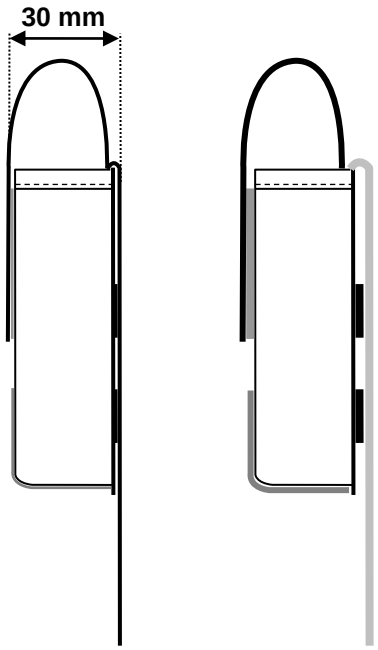
Item 2 - 3.1.2.1 - Nr 4 - Annexure B 4 - Tactical Jacket and Detachable pouch (POP)



D-1: Front view



D-2: Back view



D-3: Side view

A.3.5 Type E: *Orca* radio pouch

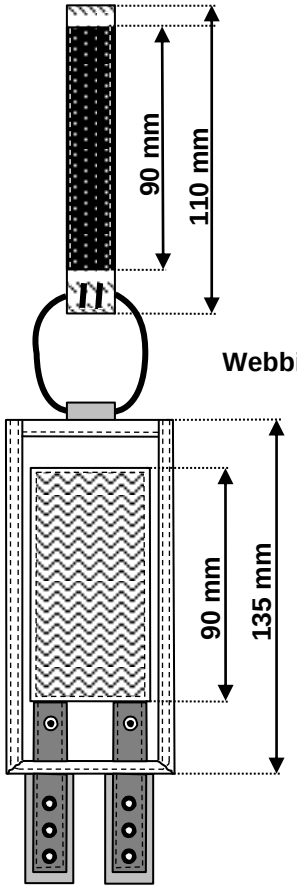
- of outer material
- to consist of front and back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 45 mm
- back panel to be of double folded outer material
- pocket mouth (front panel) to be bound with binding
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 50 mm
  - of finished length 90 mm
  - centrally positioned in the length of the front panel

- fitted with two type B webbing straps
  - each of finished length 25 cm, extending from 50 mm below the top edge of the back panel (only 20 cm is visible)
  - free edges to be heat-sealed
  - positioned next to each other (in centre)
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

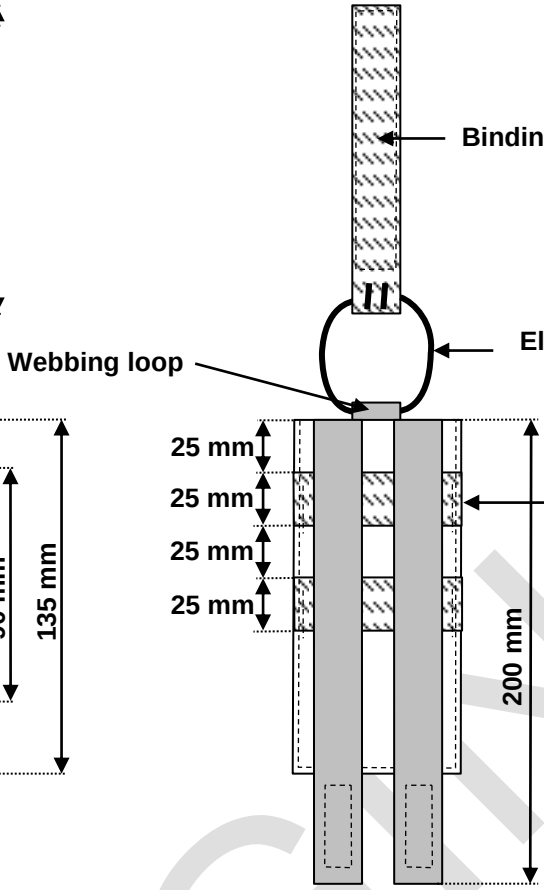
- fitted with a loop of type B webbing
  - of finished length 50 mm (after being folded double)
  - sewn on top of the two loose webbing straps on the inside of the back panel
  - loop to be fitted with a length of **circular** elastic webbing
    - elastic braid to be of finished length 90 mm (after being folded double)
    - ends of elastic braid to be properly secured (not knotted) with bar-tacks
    - elastic webbing loop to be fitted with a double folded strip of binding tape
    - binding tape to be of finished length 11 cm (after being folded double)
    - binding tape fitted with male touch and close fastener of length 90 mm and positioned 10 mm from the free edge of the tape

- bottom edge of pouch to be fitted with two sections of press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced male press-studs
    - bottom edge to be sewn in with the bottom seam of the front panel
    - in corresponding positions to the female sections attached to the two loose webbing straps

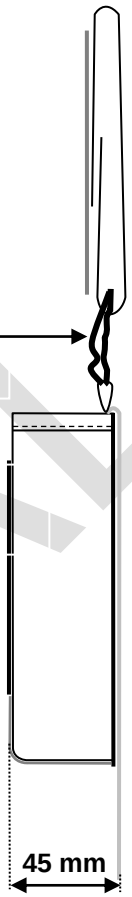
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 35 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures E-1 to E-3



E-1: Front view



E-2: Back view



E-3: Side view

A.3.6 Type F: Tetra radio pouch

- of outer material
- to consist of front and back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 45 mm
- back panel to be of double folded outer material
- pocket mouth (front panel) to be bound with binding tape
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 50 mm
  - of finished length 90 mm
  - centrally positioned in the length of the front panel

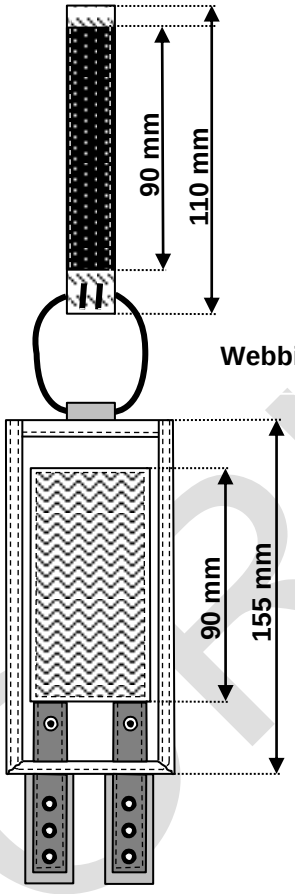
- fitted with two type B webbing straps
  - each of finished length 27 cm, extending from 50 mm below the top edge of the back panel (only 22 cm is visible)
  - free edges to be heat-sealed
  - positioned next to each other (in centre)
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

- fitted with a loop of type B webbing
  - of finished length 50 mm (after being folded double)
  - sewn on top of the two loose webbing straps on the inside of the back panel

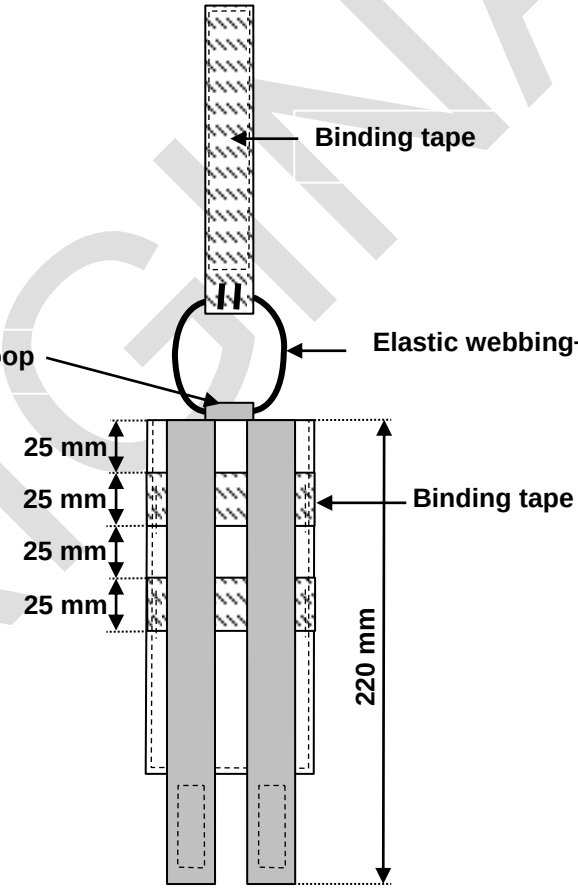
- loop to be fitted with a length of **circular** elastic webbing
  - elastic braid to be of finished length 90 mm (after being folded double)
  - ends of elastic braid to be properly secured (not knotted) with bar-tacks
  - elastic webbing loop to be fitted with a double folded strip of binding tape
  - binding tape to be of finished length 11 cm (after being folded double)
  - binding tape fitted with male touch and close fastener of length 90 mm and positioned 10 mm from the free edge of the tape

- bottom edge of pouch to be fitted with two sewn-down sections of press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced male press-studs
  - bottom edge to be sewn in with the bottom seam of the front panel
  - in corresponding positions to the female sections attached to the two loose webbing straps

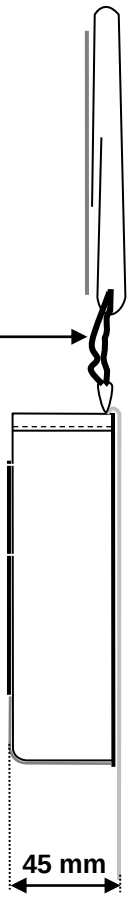
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 35 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures F-1 to F-3



F-1: Front view



F-2: Back view



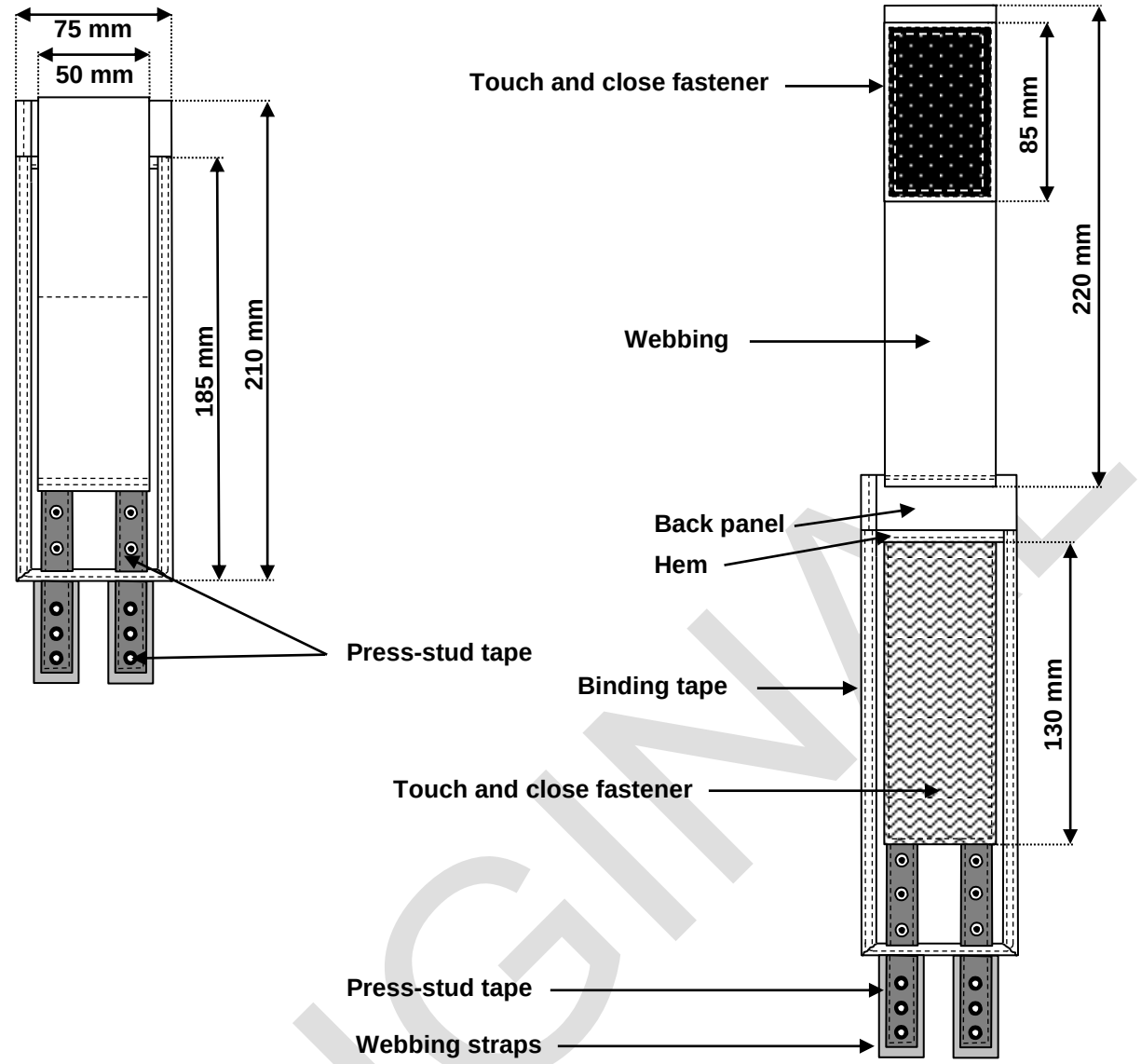
F-3: Side view

A.3.7 Type G: R1-magazine pouch

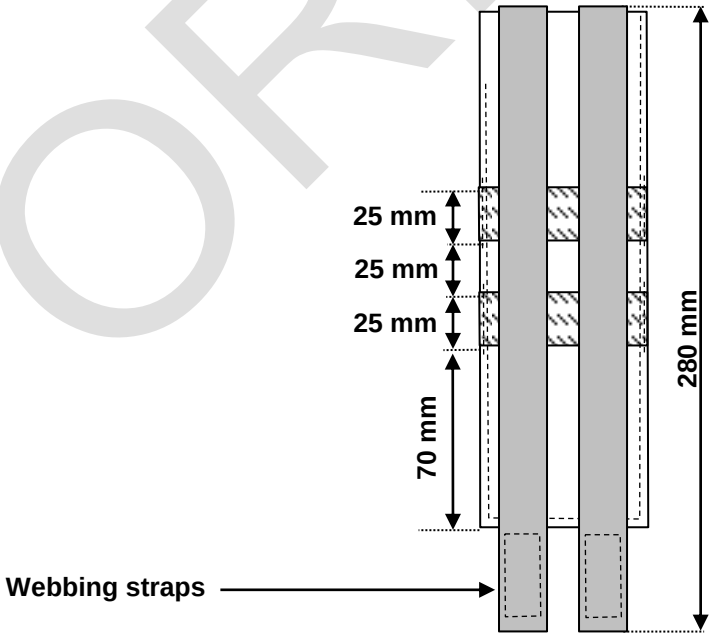
- of outer material
- to consist of a front panel and a back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 40 mm
- back panel to be of double folded outer material
- front panel to have a hem of finished width 10 mm
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 50 mm
  - of finished length 13 cm
  - to extend from 10 mm below the mouth opening
- fitted with a length of webbing
  - of finished length 22 cm, extending from 10 mm below the top edge of the back panel
  - type C webbing
  - centrally positioned and sewn to the inside of the top edge of the back panel
  - raw edges to be heat-sealed
  - free edges to be turned-in and sewn down
  - free end to be fitted with touch and close fastener
    - male section
    - of length 85 mm
    - sewn along all four edges
    - positioned 10 mm from the free edge

- fitted with two type B webbing straps
  - each of finished length 29 cm, extending from 10 mm below the inside top edge of the back panel
  - free edges to be heat-sealed
  - positioned next to each other (in centre)
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges
- bottom edge of pouch to be fitted with two sewn-down sections of press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced male press-studs
    - bottom edge to be sewn in with the bottom seam of the front panel
    - in corresponding positions to the female sections attached to the two loose webbing straps

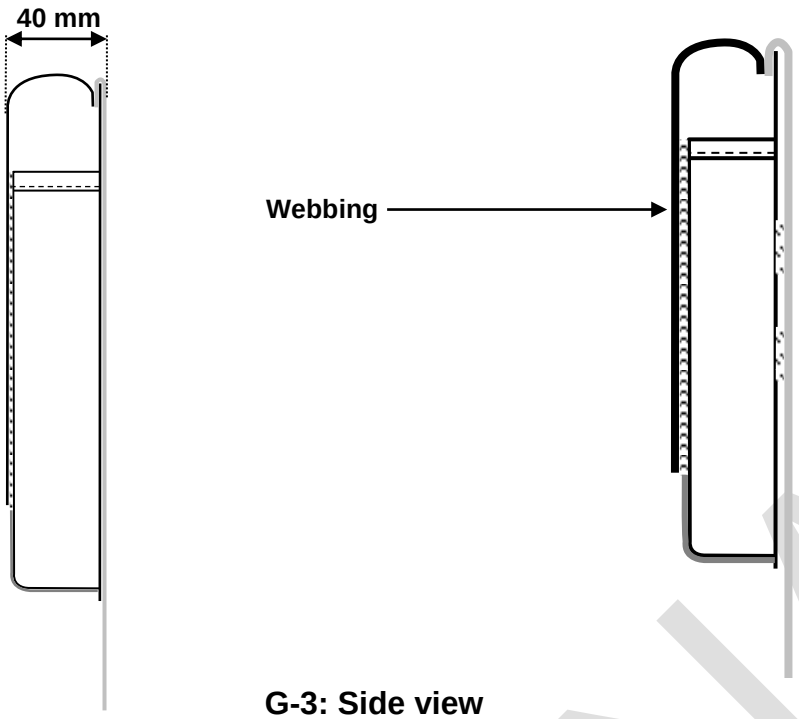
- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
  - bottom edge of bottom most tape to be positioned 60 mm above the bottom seam of the back panel
- to comply with the dimensions and shape as given in figures G-1 to G-3



G-1: Front view



G-2: Back view



G-3: Side view

A.3.8 Type H: Shotgun ammunition pouch

NOTE: The design of the pouch may deviate from the requirements below. All changes shall be as agreed upon between the Tshwane Metropolitan Police Department and the supplier.

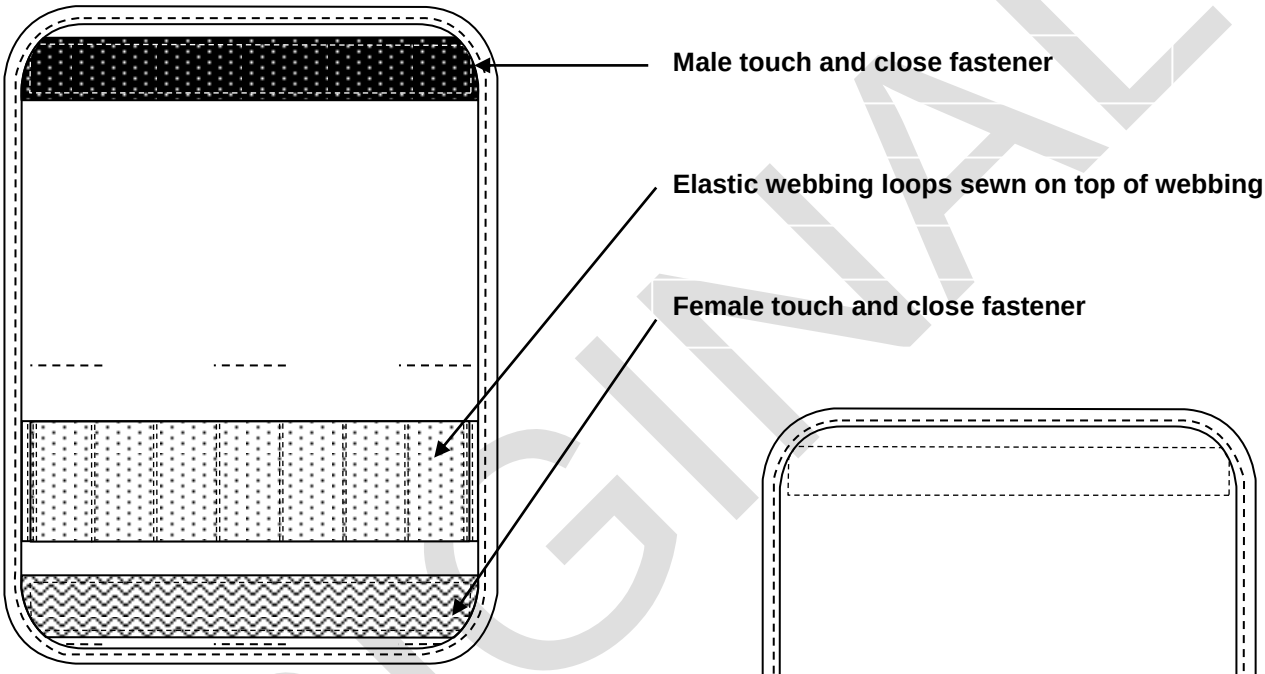
- of outer material
- lined with outer material
- outer material layer and lining to be bound together with binding tape along all edges
- to be designed in such a way that the top edge shall fold over as to form a flap
- fitted with a length of type C webbing on the inside
  - a length of elastic webbing shall be sewn on top of the webbing in such a way that it shall make provision for 7 shotgun shells
  - elastic webbing to form loops and vertically stitched between each loop
  - elastic webbing to be of nominal width 50 mm
  - positioned in such a way that the shells can be easily removed and such that the flap can be closed comfortably
  - securely sewn to the outer material base
- fitted with two lengths of touch and close fastener
  - of width 25 mm
  - to extend along the full width of the pouch
  - male section to be positioned at the top edge on the inside of the pouch
  - female section to be positioned at the bottom edge on the inside of the pouch

- fitted with three type B webbing straps at the bottom edge of the pouch
  - sewn in with the binding at the bottom edge of the back
  - of such length as to neatly fasten to the shorter webbing straps on the back of the pouch
  - free edges to be heat-sealed
  - equidistantly spaced
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

- fitted with three type B webbing straps in the centre at the back of the pouch
  - free edges to be heat-sealed
  - top edges to be sewn to the back of the pouch

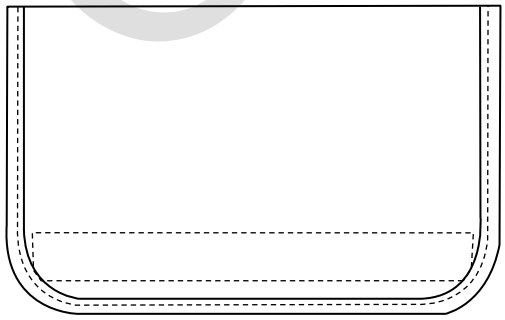
- in corresponding positions to the longer webbing straps at the bottom edge of the pouch
- free ends to each be fitted with press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced male press-studs, in corresponding positions to the female sections attached to the bottom webbing straps
  - sewn along all four edges

- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back
  - spaced 25 mm apart
- to comply with the shape as given in figures H-1 to H-4
- dimensions to be such as to neatly accommodate all the components and to ensure that the flap is functional

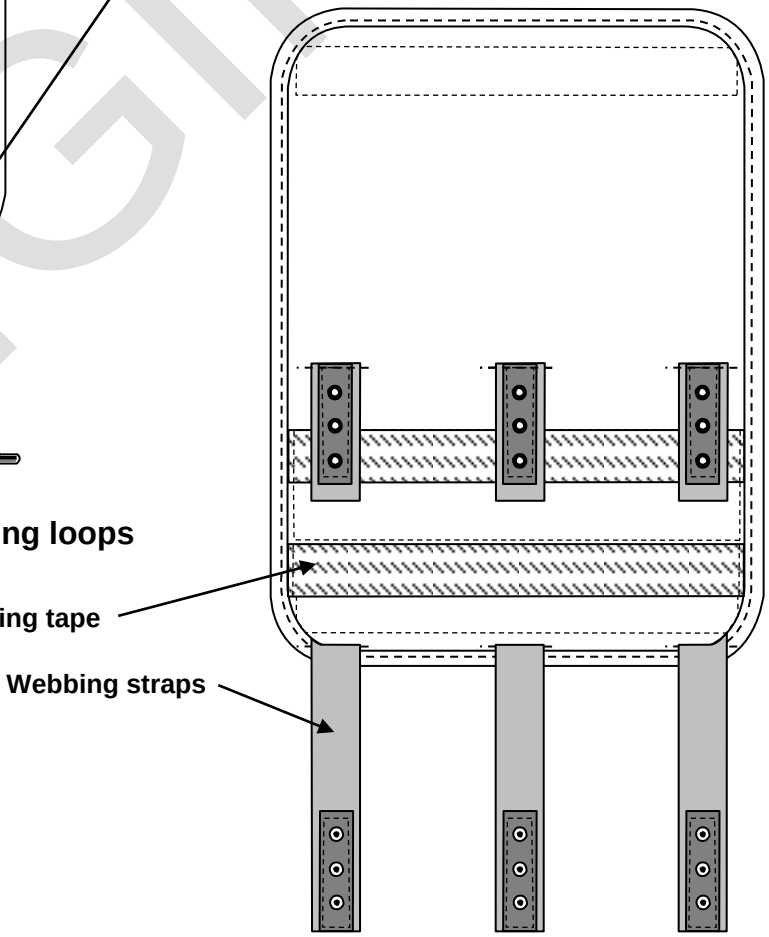


H-1: Inside view

H-2: Construction of elastic webbing loops



H-4: Front view with closed flap



H-3: Back view

A.3.9 Type I: Cable pouch

NOTE: The design of the pouch may deviate from the requirements below. All changes shall be as agreed upon between the Tshwane Metropolitan Police Department and the supplier.

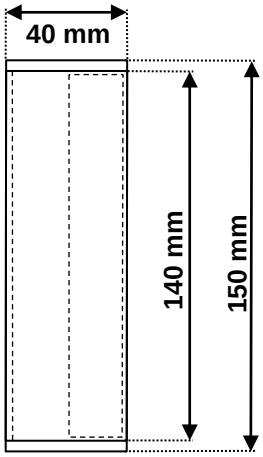
- to consist to two layers of webbing sewn on top each other along one side edge
- type D webbing
- bottom layer to be of double folded webbing
  - fitted with a length of touch and close fastener
    - female section
    - of width 25 mm
    - sewn along all edges
    - positioned along the free side edge
    - to extend from 10 mm below the top edge of the pouch
- top layer to be a single layer of webbing
  - to form a covering flap
  - raw edges to be heat-sealed, folded inwards and sewn down
  - fitted with a length of touch and close fastener
    - male section
    - of width 25 mm
    - sewn along all edges
    - positioned in a corresponding position the female section

- fitted with a single type B webbing strap at the top edge of the pouch
  - bar-tacked to the top edge of the back of the pouch
  - of such length as to neatly fasten to the shorter webbing straps at the bottom of the pouch
  - free edges to be heat-sealed
  - of such length that it shall fit over three horizontal webbing strips that are attached to the front of the tactical jacket
  - free end to be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

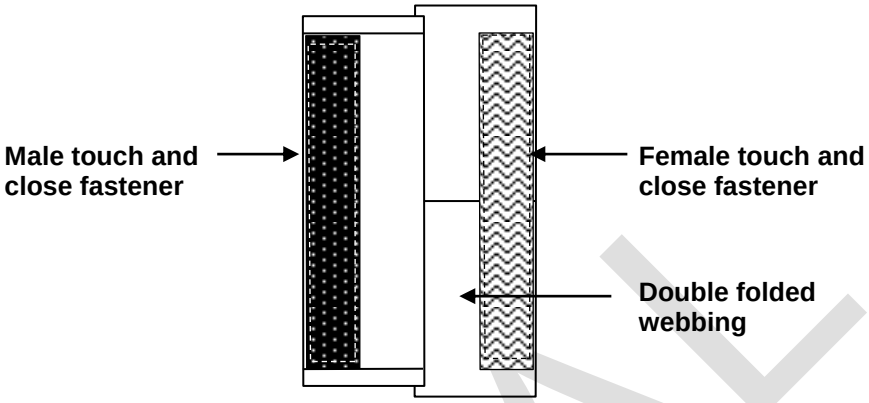
- fitted with a single type B webbing straps at the bottom edge of the pouch
  - bar-tacked to the bottom edge of the back of the pouch
  - free edges to be heat-sealed
  - in a corresponding position to the webbing strap at the bottom edge of the pouch
  - free ends to each be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced male press-studs, in corresponding positions to the female sections attached to the top webbing straps
    - sewn along all four edges

- fitted with two lengths of binding tape
  - horizontal
  - spaced 25 mm apart

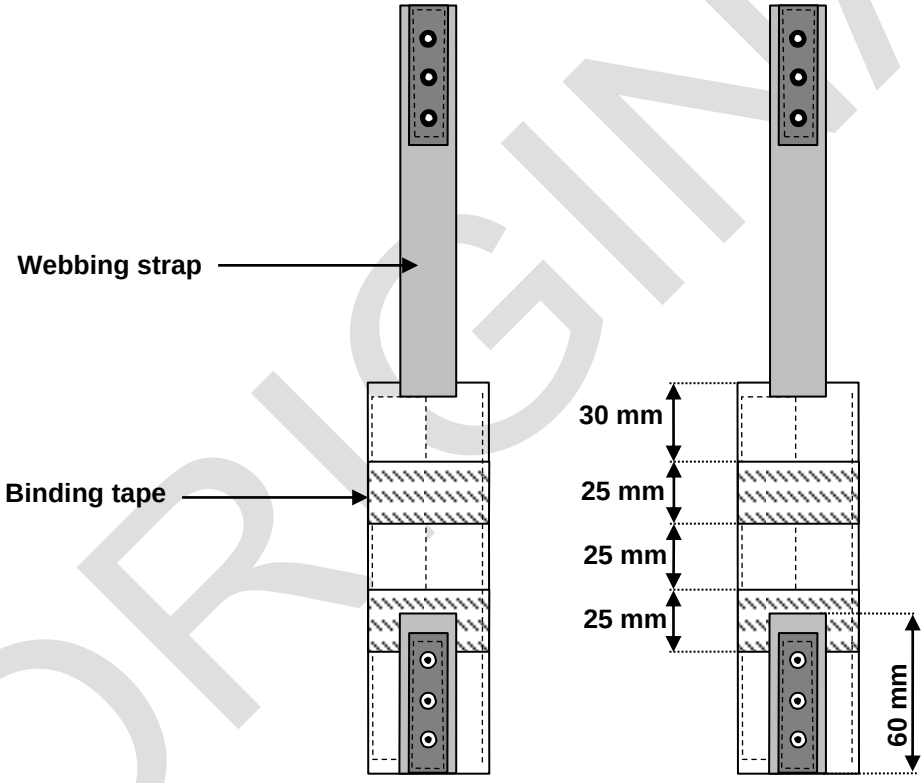
- to comply with the dimensions and shape as given in figures I-1 to I-3



I-1: Front view



I-2: Open flap



I-3: Back view

A.3.10 Type J: Smoke/Grenade/Stun pouch

- of outer material
- to consist of a front panel and a back panel
- bellows type pocket
  - bottom corners to be stitched in such a way that the pocket shall have a depth of 40 mm
- back panel to be of double folded outer material
- front panel to have a hem of finished width 10 mm
- side and bottom edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of width 50 mm

- of finished length 80 mm
- to extend from 10 mm below the mouth opening

♦ fitted with a length of webbing
- of finished length 18 cm, extending from 10 mm below the top edge of the back panel

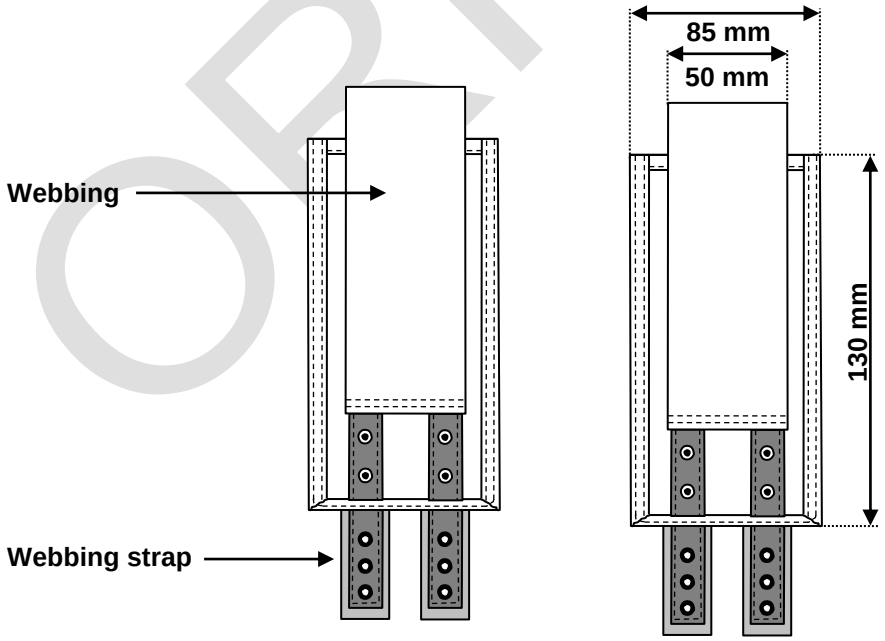
- type C webbing
- centrally positioned and sewn to the inside of the top edge of the back panel
- raw edges to be heat-sealed
- free edges to be turned-in and sewn down
- free end to be fitted with touch and close fastener
  - male section
  - of length 80 mm
  - sewn along all four edges
  - positioned 10 mm from the free edge

♦ fitted with two type B webbing straps
- each of finished length 22 cm, extending from 10 mm below the inside top edge of the back panel
- free edges to be heat-sealed
- positioned next to each other (in centre)
- free ends to each be fitted with press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced female press-studs
  - sewn along all four edges

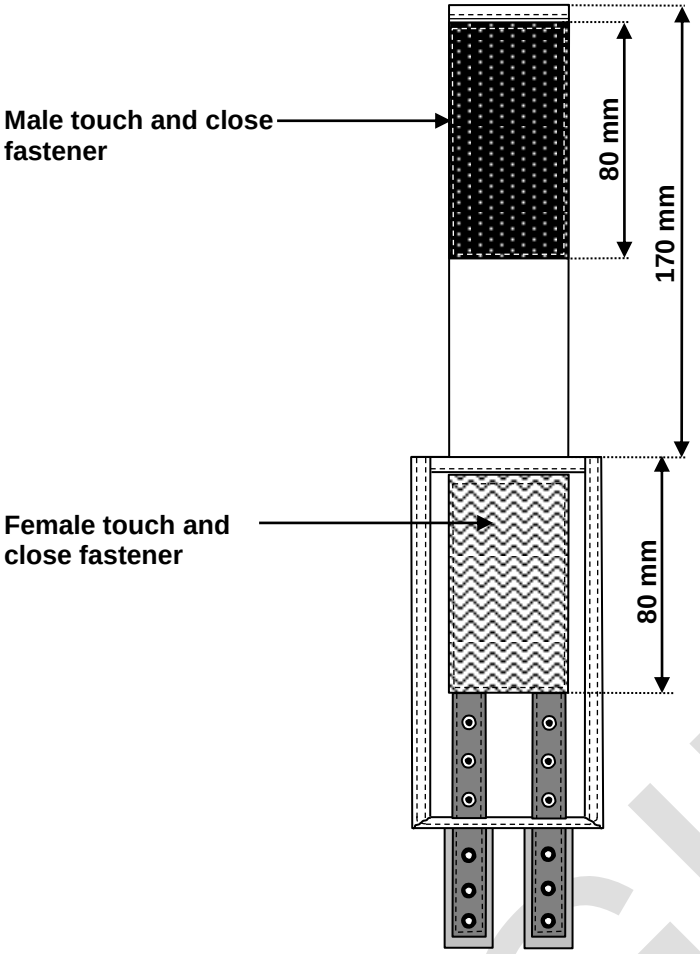
♦ bottom edge of pouch to be fitted with two sewn-down sections of press-stud tape (popper tape)
  - of length 60 mm
  - containing three equidistantly spaced male press-studs
  - bottom edge to be sewn in with the bottom seam of the front panel
  - in corresponding positions to the female sections attached to the two loose webbing straps

♦ fitted with two lengths of binding tape
- horizontal
- free edges to be sewn in with the sides seams of the back panel
- spaced 25 mm apart
- bottom edge of bottom most tape to be positioned 35 mm above the bottom seam of the back panel

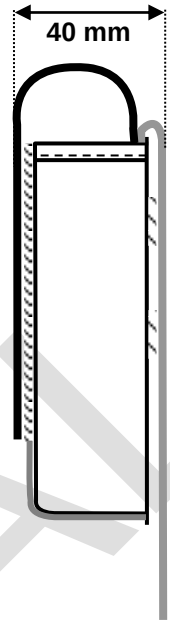
♦ to comply with the dimensions and shape as given in figures J-1 to J-4



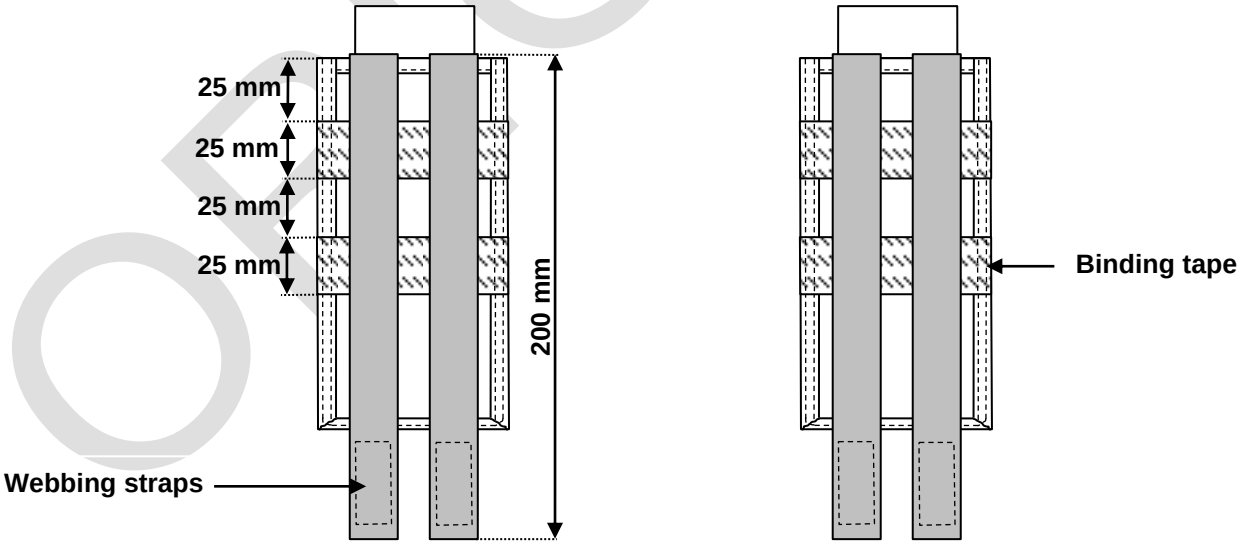
J-1: Front view



J-2: Front view with open webbing flap



J-3: Side view



J-4: Back view

A.3.11 Type K: LED pouch

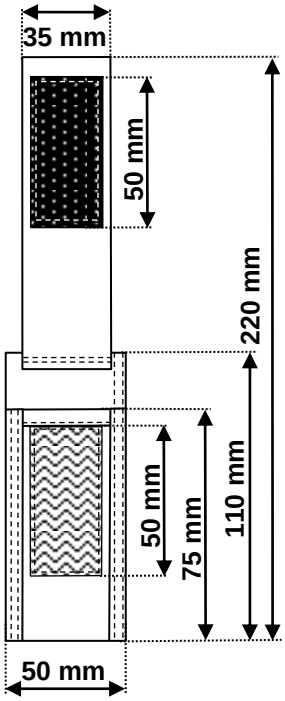
NOTE: The design of the pouch may deviate from the requirements below. All changes shall be as agreed upon between the Tshwane Metropolitan Police Department and the supplier.

- of outer material
- to consist of a front panel and a back panel
- back panel to be of double folded outer material
- front panel to be of outer material and shall form a loop that shall neatly accommodate a LED light
- bottom edge of pouch shall be left open and not sewn down
- top and bottom edges of front panel to have hems of finished width 10 mm
- side edges of front panel to be bound with binding tape and sewn on top of the back panel
- front panel to be fitted with a length of touch and close fastener
  - female section
  - of finished length 50 mm
  - to extend from 10 mm below the mouth opening
- fitted with a length of webbing
  - of finished length 12 cm, extending from 10 mm below the top edge of the back panel
  - type D webbing
  - centrally positioned and sewn to the inside of the top edge of the back panel
  - raw edges to be heat-sealed
  - free edges to be turned-in and sewn down
  - free end to be fitted with touch and close fastener
    - male section
    - of length 50 mm
    - sewn along all four edges
    - positioned 10 mm from the free edge

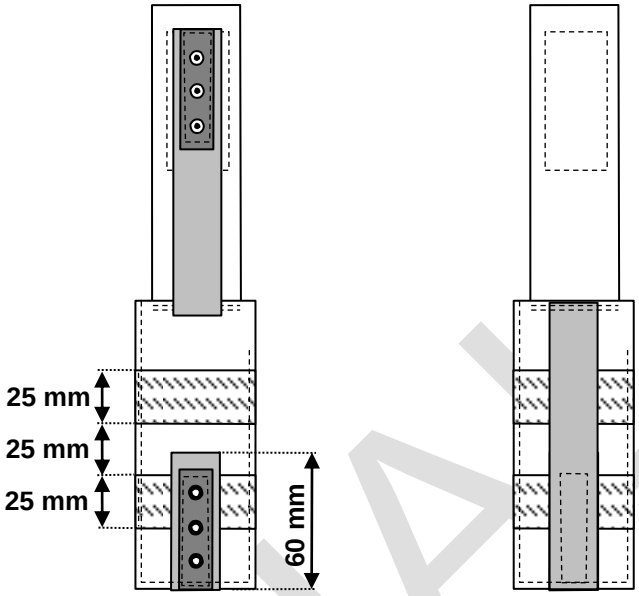
- fitted with a single length type B webbing strap
  - of such length that it shall neatly fasten to the shorter webbing straps sewn to the bottom edge of the back panel
  - extending from 10 mm below the inside top edge of the back panel
  - free edge to be heat-sealed
  - free end to be fitted with press-stud tape (popper tape)
    - of length 60 mm
    - containing three equidistantly spaced female press-studs
    - sewn along all four edges

- bottom edge of back to be fitted with a single length type B webbing
  - bar-tacked to the bottom edge of the back panel
  - free end to be fitted with press-stud tape (popper tape)
    - containing three equidistantly spaced male press-studs
    - in corresponding positions to the female sections attached to the longer webbing strap

- fitted with two lengths of binding tape
  - horizontal
  - free edges to be sewn in with the sides seams of the back panel
  - spaced 25 mm apart
- to comply with the dimensions and design as given in figures K-1 to K-3



K-1: Front view



K-2: Back view

K-3: Cross section

Item 2 - 3.1.2.1 - Nr 4 - Annexure B 4 - Tactical Jacket and Detachable pouch (POP)

ANNEX B

(Normative)

Bid sample submission requirements

In addition to the bid documents, each bidder shall submit the following:

A.1 Bid sample jacket that comply with the requirements of the specification.

A.2 Detailed certificates/technical documentation to support the fabric qualities(s).

A.3 Any deviation from this specification shall be clearly identified and motivated by means of a written report that shall be submitted together with each sample for consideration.

A.4 Exemption certificates from the Department of Trade and Industry, if relevant.

A.5 The bid sample shall be submitted in the following size:

- **Large/X-Large as given in table 6**

ANNEX C

(Normative)

Special conditions of bid
(Applicable to the successful bidder)

C-1 GENERAL

C-1.1 Unless otherwise stated, the TMPD (or an organization appointed by it), shall be the inspecting authority.

C-1.2 Three pre-production sample jackets, in different sizes and three pouches of each type ordered, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. **Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 6) and the relevant certificates that prove compliance with the requirements of each component**. It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

C-1.3 The jackets and pouches shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on jackets and pouches supplied to this specification may be in progress

C-1.4 The contractor shall inspect the finished jackets and pouches for compliance with the specification before submitting them to the inspecting authority for final inspection.

C-1.5 Before acceptance, the jackets and pouches shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

C-2 DOCUMENTATION

One container of each consignment shall be marked “DOCUMENTS” and in addition to the jackets and pouches, shall contain the following:

a) The packaging slip or delivery note;
b) where applicable the inspection certificate(s);
c) a copy of the invoice containing the following information:
   - the order number
   - the financial authority number
   - a full description of the consignment, i.e. quantity, etc

ANNEX D

(Normative)

CKS 129/DP Colours

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re-registration shall be required.

NOTE: *Before fabric and/or thread is sent to the Inspection Authority for colour registration purposes, the successful bidder shall confirm with the Inspection Authority whether a submission is required or not.*

A. The following scenarios require a submission of three metres of fabric and/or one reel of embroidery thread of each colour from the successful bidder:

1. A colour standard is archived.
2. First time registration is required (CKS 129/DP colour number does not exist).
3. The custodian of the colour library is out of stock.

B. Requirements for the submission of fabric and thread as identified in A:

1. The colour shall be as agreed upon between the TMPD and the successful bidder.
2. The fabric and embroidery thread shall be used to make new colour swatches which shall be the responsibility of the custodian of the colour library.
3. The cost of the three metres of fabric and embroidery thread shall be incorporated in the relevant bid submission.

For office use only		
HISTORY SHEET		
DOC ISSUE	**DATE**	**AMENDMENTS/HISTORY**
00.1	June 2018	First draft
01.0	July 2018	First release Right front embroidery to be embroidered on a patch and not straight onto jacket