

TENDER SPECIFICATION OF INFLATABLE BULLET PROOF JACKET

1. **Name of the Items.** Inflatable Bullet Proof Jacket (IBPJ)
2. **Purpose.** IBPJ is a body armor manufactured for ballistic protection of covered area with long lasting floatation capability. This jacket is made of bullet resistant Ultra light-weight polyethylene fibers (PE) designed to stop fragments from grenades rockets and booby traps and keep the user in float if fall in water.
3. **Quantity.** 200 in no.
4. **Year of Manufacture.** 2023 or later.
5. **Brand/ Model.** To be mentioned.
6. **Name of Manufacturer.** Name and full address is to be mentioned.
7. **Country of Origin.** Australia, Canada, South Korea, Japan, Singapore, Turkiye, Norway USA, UK, France, Germany, Greece, Spain, Sweden, Netherlands, Italy and Denmark
8. **Manufacturing Country.** Australia, Canada, South Korea, Japan, Singapore, Turkiye, Norway USA, UK, France, Germany, Greece, Spain, Sweden, Netherlands, Italy and Denmark.
9. **Local Agent.** Name and Full address of the local agent to be mentioned.
10. **Qualification of Bidder.** Only the enlisted supplier of DGDP can submit quotation from the genuine manufacturer or their authorized dealer(s). Manufacturer's authorization Certificate is to be submitted with the offer. In case of dealer, manufacturer has to authorize the dealer and dealer has to authorize the supplier. In this regard both authorization certificates is to be submitted with the offer.
11. **Description.** IBPJ must fulfill the requirement of National Institute of Justice (NIJ) Standard. All portions of the jacket must qualify minimum NIJ protection level IIIA.
12. **Characteristics.** IBPJ should meet the following requirements:
 - (1) Blast protected.
 - (2) Integrated with built in MARINE-X foam for long lasting floatation capability.
 - (3) Manufactured with one waist-band strap for extra support and two vertical nylon straps to keep tight on user during in-water operations.
 - (4) Capable to protect Front, Back, Shoulder and Neck in protection level NIJ IIIA.
 - (5) Removal Soft Armor panels (SAP) for washing & dry cleaning.
 - (6) Should have water proof ballistic panels/ covers.
 - (7) Full freedom of movement.
 - (8) Utility pocket (CSMG magazine).
 - (9) Securing strap (loop type) to carry walkie-talkie set.
 - (10) Lightest possible versions.
 - (11) Male version.
 - (12) Easy care and salt water-resistance outer-shell.
 - (13) Removable and waterproof ballistic panels.
 - (13) Pocket for additional hard armor insert on front and back of vest.
 - (14) Quick release system.

13. Detail Specification of Inflatable Bullet Proof Jacket.

a. Detail Dimensions. Soft armor panels should be waterproof ultra light-weight polyethylene (PE). Shape, size and dimensions of various armor panels are appended below (As per Sample):

(1) Floatation Foam Panel – Front.

- (a) Height- Max: 58 cm, Min: 27 cm (± 1 cm)
- (b) Width- Max: 47 cm, Min: 36 cm (± 1 cm)

(2) Floatation Foam Panel- Back

- (a) Height – Max: 49 cm, Min: 27 cm (± 1 cm)
- (b) Width – Max: 49 cm, Min: 36 cm (± 1 cm)
- (c) Neck- 23 cm

(3) Front and Back Ballistic.Panels

- (a) Height- Max: 40 cm, Min: 18 cm (± 1 cm)
- (b) Width-Max: 46.5 cm, Min: 34 cm (± 1 cm)

(4) Shoulder Panel: 25.5 cm x 11 cm x 7 cm x 8 cm (± 1 cm)

(5) Collar Panel: 34 cm x 21 cm x 7 cm (± 1 cm)

b. Material. Soft armour panel should be lightweight Polyethylene Fiber (PE). Each panel must consist of at least 36 layers of ballistic material, with an additional layer of trauma foam on the back (not trauma plate). The weight of the PE material must be at least 130g/m² to account in each layer used.

(1) Thickness. The ballistic panel should have thickness of under 2 cm including trauma foam.

(2) Protection Level. Should provide NIJ protection Level IIIA.

(3) Buoyancy. At least 150N. The vest is to last for 24 hours and hold at least 100 kg. Details are to be mentioned.

c. Outer Cover of Jacket.

(1) Fabric. Outer cover of jacket should be made of oxford (Durable 500X600D Polyester) cloth and washable. Fabric should be durable with a strong coating of Polyurethane (PU) treatment to be water resistant and ultraviolet (UV) resistant. Fabric specification should be: GSM: 270g, Wrap / EIP: 30 cm and Weft/PPI: 15 cm.

(2) Color/ Shade: Digital combat cloth of BN uniform.

Color of Digital Combat Print:

Ser	Color	PANTONE Color Name	PANTONE Number
1.	Grey	Sharkskin	17-3914 TCX
2.	Deep Ocean	Stargazer	19-4316 TCX
3.	Olive	Urban Chic	19-5004 TCX
4.	Dark navy	Dark Sapphire	19-4020 TCX
5.	Printed as per approved BN Pattern		

(3) Utility Pocket. Should have 03 in no utility pocket of Size: 22 cm x 7.5 cm x 5 cm for CSMG magazine and 02 in No Utility pocket of Size 16.25 cm x 7.25 cm x 2.5 cm for Pistol magazine. (± 1 cm is acceptable for size)

(4) **Extra Pocket.** Should have two extra pockets front and back side to house hard armour plates of dimension: 32 cm x 20 cm x 2.2 cm and 30 cm x 26 cm x 2 cm respectively. Flap of extra pockets will be 26.5 cm x 8 cm and fixed by Velcro of Size 24.3 cm x 5 cm. (± 1 cm is acceptable for size dimension, Flap, Velcro of Size)

(5) **Velcro.** 02 x Velcro (Size Large – 19x16.25 cm, Medium – 19x13.5 cm and small – 19x12.25 cm) should be stitched on both side of the utility pockets. Size of flap of utility pocket is 13.5x9.5 cm. Flaps are to be closed with the pockets by means of Velcro (12x5 cm). Location of extra Velcro should be attached to lower abdomen guard. (± 1 cm is acceptable for size, utility pocket, Flap and Velcro)
As per sample.

(6) **Overlapping Strap.** An overlapping strap (82 cm x 20 cm) made of double layer should be attached on the exterior side of the back outer cover of jacket. 40 cm length of the strap (middle portion) to be stitched on the exterior side of the back outer cover of jacket and 21 cm both of the sides to be kept open with strap stitched (19 cm x 20 cm). The location of strap from the base should be 4 cm. (± 1 cm is acceptable for measurement. As per sample.

(7) **Securing Straps for Walkie-talkie.** Should have one securing straps (loop type) on chest of jacket (Left or Right) for carrying walkie-talkie sets.

(8) **Waist Belt Male and Female Buckle Material.** Material of waist belt male and female buckle should be high quality steel/ stainless steel/ plastic.

14. **Operating/Storage Condition.**

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|----|--|------------------|
| a. | Operating temperature range | : 0° c to 55° c. |
| b. | Storage temperature range | : 0° c to 60° c. |
| c. | Humidity permissible condition for operation | : Up to 95%. |
| d. | Maximum permissible humidity condition for storage | : Up to 98%. |

15. **Weight.** 4 \pm 0.5 kg. (Less weight qualifying other conditions will be preferable)

16. **Instruction for Stitching.** All Velcro should be double stitched, with the exception of flaps on pockets. Ultra light-weight Polyethylene (PE) fibers panels are to be thermo-sealed on the edges so that water/ humidity do not enter. The edges must be thermo-sealed and not sewn/ stitched.

17. **Anti Trauma Material.** All soft armour panels (front, back & shoulder) should have well anti trauma material to minimize the trauma effect. Anti-trauma material should be a layer of durable "trauma foam".

18. **Non Toxic.** The manufacturer should provide a certificate that all materials of the IBPJ are non-toxic to human skin.

19. **Non Pig Components.** The manufacturer is to provide a certificate that the materials of the IBPJ do not include any raw materials sourced from pig.

20. **Anti Mosquito Treatment.** Anti-mosquito treatment is to be applied to the jacket fabric to prevent to repel 90% or more mosquito landings.

21. **Shelf Life.** Shelf life of the jacket should be 10 years from the year of manufacture. Shelf life Certificate is to be provided with the offer.

22. **Sample.** 02 (Two) complete set of offered IBPJ is to be supplied with the offer for evaluation of tender and ballistic test. **Offer without sample will not be accepted.**

23. **Ballistic Test.** The jacket should qualify the ballistic and bullet proof test. Each part of one complete sample will be tested for resistance to ballistic penetration and Back Face Signature (BFS). Complete penetration or any designated depth measurement of BFS in the backing material greater than 44 mm (1.73") by any fair hit shall constitute a failure. The details of ballistic test is as follows:

Threat Level	Materials	Caliber of Ammunition	Bullet Weight (gm)	Muzzle Velocity (m/sec)	Distance (m)
NIJ-IIIA	Each Soft Armour panels from jackets	9 x 19 mm Parabellum FMJRM	8.2	436	5

24. **Washing Test, Dye Fastness to Sunlight Test and Water Resistance Test (Outer cover cloth of Jacket).** Supplied sample (Outer cover cloth of Jacket) should qualify Washing Test, Dye Fastness to Sunlight Test and Water Resistance Test. Description of the tests are as follows:

- a. **Washing Test** Sample will be kept in the reagent of 0.5% soap flakes for 1.5 hrs at 60°C. Subjected to washing test minimum grading 3 out of 4 in that test will be accepted.
- b. **Dye Fastness to Sunlight Test** If the sample is qualified in Washing Test, it will be subjected to dry fastness test minimum grading 3 out of 4 in that test will be accepted.
- c. **Water Resistance Test (Cone Test)** Supplied sample will be subjected to Cone Test minimum grading 3 out of 4 in that test will be accepted.

25. **Labeling.**

a. **Ballistic Panels.** Every ballistic panel should have a label. The label should be permanently attached to exterior surface of the panel. The label should contain the following information, printed in English Language with permanent ink or sticker:

- (1) Name, logo or other identification of the manufacturer.
- (2) The rated level of protection.
- (3) Size.
- (4) Lot number.
- (5) Date of manufacture.
- (6) Strike face or wear face.
- (7) Serial number.
- (8) Care instructions.

b. **Outer Cover of Jacket.** Outer cover of jacket with removable ballistic panels should have label stitched on the exterior side of back armour carrier facing body. The label should contain the following information, printed in English Language with permanent ink:

- (1) Name, logo or other identification of the manufacturer.
- (2) A statement for the user to look at the ballistic panels to determine the level of ballistic protection (This warning to be typed with letters at least twice the size of rest of the type on the level).
- (3) Size.
- (4) Serial number.
- (5) Lot number.
- (6) Date of manufacture.
- (7) Care instructions.
- (8) Any special condition for washing/use.

26. **Inspection Certificate.** All components of the IBPJ should have printed inspection certificate of the manufacturer with the year and month of manufacture.

27. **Manufacturer's Certificate.** Certificate from the manufacturer is to be provided with the offer indicating the year of manufacture and shelf life.

28. **Packing Details.** Each IBPJ is to be packed in standard nylon carry bag, 20 in no jackets are to be packed one Sea/Air worthy Carton. All packages should be shipped by Sea worthy container/ Pallet for Air shipment. Carton size is to be mentioned. Each package is to be marked as follows:

- a. Name of Item
- b. Contract no and date
- c. Quantity
- d. Year of manufacture
- e. Supplier's name and address with contact number.
- f. Consignee's address

29. **Brochure/Catalogue.** 01 (One) copy of original brochure/catalogue in English are to be provided with the offer for evaluation of tender. Product brochures of the manufacturer are to be provided along with the offer.

30. **Manual.** 02 (Two) sets of instruction (for preservation and long storage) manual (in English) are to be supplied with the stores.

31. **Warranty.**

- a. 'Warranty is to be given for 01 year from the date of acceptance by BN'. If any defect/discrepancy of any item arises within the period of warranty, the specific period from the date of notification to the supplier up to the date of rectification of defect/resolve of discrepancy will have to be extended from the warranty period for that particular item(s).
- b. If any defect/discrepancy arises within warranty period, then the item(s) are to be replaced free of cost including freight within 03 (three) months from the date of notification of the same to the supplier. For warranty replacement, the supplier will collect the defective item(s) from NSD Chattogram and re-supply the same to collecting place after the warranty repair.
- c. Warranty certificate will be submitted with the offer.

32. **Guarantee.** Guarantee is to be given that the 'IBPJ' will be suitable to meet the purpose and technical specification mentioned in Para 2 and 12-25 and the performance of the 'IBPJ' will remain effective in all respect for the period of shelf life. Guarantee Certificate will be submitted with the offer.

33. **Quality Assurance.** Defense Quality Assurance Certificate will be provided by the appropriate Quality Assurance Organization of the manufacturing country

34. **User List.** List of users of IBPJ indicating year is to be submitted.

35. **Final Acceptance.** Final acceptance will be given after physical inspection, comparison of supplied IBPJ with approved/accepted sample and satisfactory ballistic test by NAI0. Following test shall be carried out by NAI0:

- a. Visual inspection and dimensional checkup.
- b. Ballistic Test (NIJ-III A) (01 (One) in number IBPJ will be randomly selected. Test procedure mentioned in Para 23.)
- c. Buoyancy Test (Mentioned in Para 11.b (3))
- d. Water resistance test of IBPJ (Randomly Selected).

Ballistic test/trial will be completed by NAI0 in Presence of the supplier's representative.

36. **Shipment and Delivery.**
- a. The supplier will arrange delivery of all the items to the following address:
THE COMMANDING OFFICER
NAVAL STORES DEPOT
NEW MOORING
CHATTOGRAM
BANGLADESH
 - b. **Port of shipment:** Any port of the manufacturing country.
 - c. **Delivery Schedule:** Items will have to be delivered within 180 days from the date of signing of the contract.
37. **Terms of Payment.** Total (100%) payments will be made in local currency after satisfactory inspection and acceptance by Bangladesh Navy.
38. **Validity of Offer.** Up to 30 June 2024.
39. **Certificates.** The manufacturer is required to submit the following certificates with the stores:
- a. Latest ISO Certificates
 - b. Non-toxic chemicals used in all components.
 - c. No pig components used in any of the manufacturing process.
 - d. Certificate from accredited laboratory in the USA or EU showing compliance with NIJ Standard, level 0101.06, III-A (up to at least 9 mm).
 - e. Country of origin.
40. **Compliance Statement.** A compliance statement fulfilling all the required information is to be mentioned with the offer for evaluation of tender. Any deviation from the specification is also to be mentioned in the offer. Here mentioning of Yes/No or comply will not be enough; detail technical data/ information of the offered items including those mentioned at Para 13 are to be provided. Incomplete compliance statement may attribute to cancellation of the offer.



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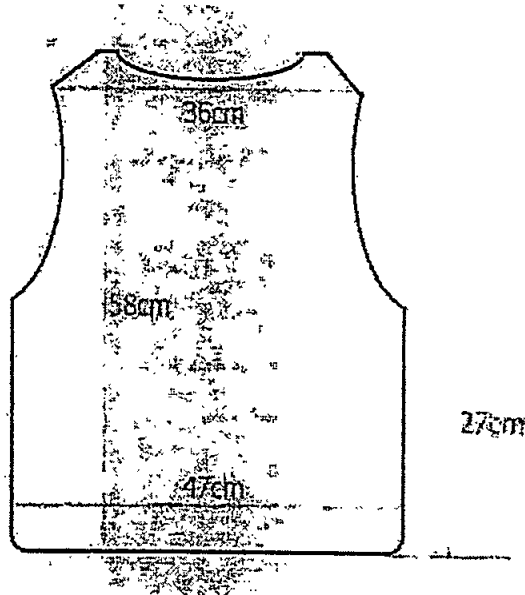


Figure: Flotation Foam Panel (Front)

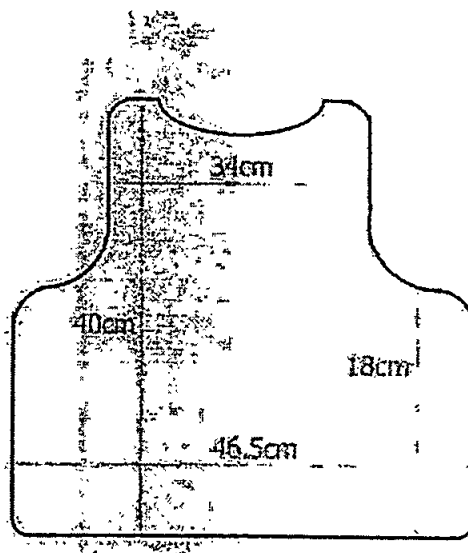


Figure: Front and back ballistic panel

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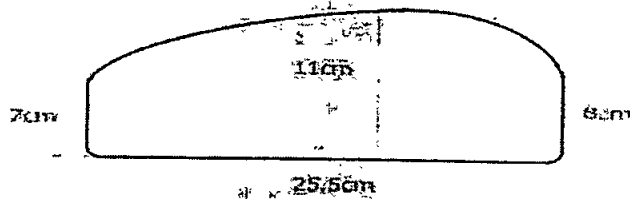
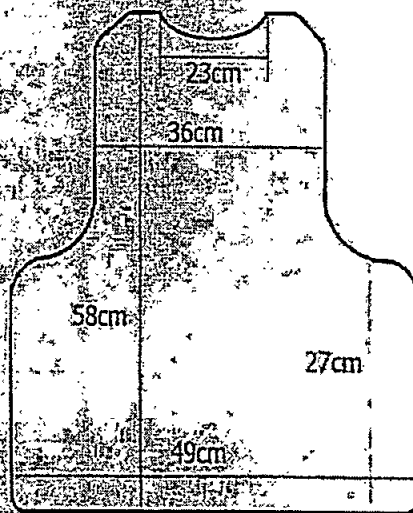
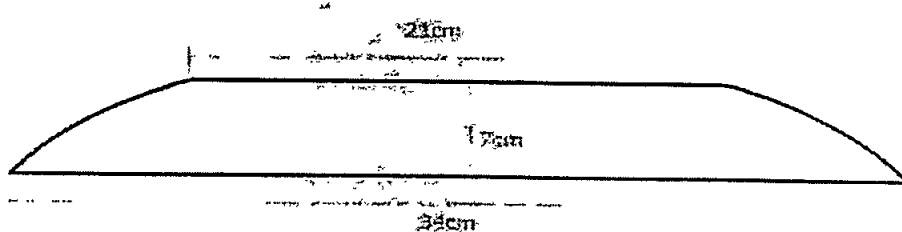


Figure: Shoulder Panel



Handwritten signature