PROVISIONAL SPECIFICATION SKU 262702

EOD HELMET WITH COMMUNICATION SYSTEM FOR BOMB DISPOSAL SUIT LA/2106/4089

Specification No. OCFAV/BDS/Helmet/26/01

Date 14.08.2026

Note: *The technical standards, performance values, quantities and test requirements below are retained from the approved source specification. Wording has been refined only for clarity and consistency.*

QUALITATIVE REQUIREMENTS

S. No.	Parameter	Qualitative Requirement
1	**Fragmentation Protection**	The EOD helmet shall provide fragmentation protection in accordance with NIJ 0117.01, NATO STANAG 2920 or MIL-STD-662F/NATO AEP 2920, against a 17-grain fragment-simulating projectile. • V50 (Helmet): 625 m/s or better • V50 (EOD Visor): 775 m/s or better *The OEM shall furnish test reports from an NABL-accredited/internationally accredited laboratory to establish the above performance against the fragmentation-protection standard offered for the helmet.*
2	**Integrity and Performance Against Blast**	The EOD helmet, in conjunction with the bomb suit, shall demonstrate integrity and performance against blast by effectively reducing blast overpressure and shock-wave effects below the injury thresholds of professionally accepted head- and ear-injury criteria. *The OEM shall furnish test reports from an NABL-accredited/internationally accredited laboratory to establish the above performance against the blast-protection standard offered for the helmet.*
3	**Head Protection Tests**	The EOD helmet shall provide head protection in accordance with NIJ 0117.01, or equivalent or better, for the following parameters: • Impact attenuation • Perforation resistance • Retention system *The OEM shall furnish test reports from an NABL-accredited/internationally accredited laboratory to establish the above performance against the head-protection standard offered for the helmet.*
4	**Optics Tests of Visor**	The EOD helmet visor shall meet the optical-performance requirements of NIJ 0117.01, or equivalent or better, for the following parameters: • Distortion test • Luminous transmittance test • Haze-resistance test • Refractive-power test • Prismatic-deviation test *The OEM shall furnish test reports from an NABL-accredited/internationally accredited laboratory to establish the above performance against the applicable standard offered for the visor.*
5	**Weight**	Weight with visor: not more than 6 kg.

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6	**Size**	The helmet shall be adjustable to accommodate different head sizes.
7(a)	**Helmet Visor**	The visor shall be replaceable when damaged and shall be capable of opening to different positions (up and down) without detaching from the helmet. A suitable mechanism shall be provided to open and close the visor.
7(b)	**Visor Cover**	A visor cover shall be provided for protection during storage.
7(c)	**Balaclava**	Ten spare balaclavas, or a primary spare inner liner hood where applicable, shall be provided with the bomb-suit helmet.
7(d)	**Ear Protection**	The helmet shall incorporate a built-in microphone and speaker to enable the operator to hear conversations in the vicinity. An automatic decibel cut-out system (85-95 dB) shall be provided to protect the operator's ears. *The OEM shall furnish a certificate from an NABL-accredited/internationally accredited laboratory.*
7(e)	**Ventilation System with Blower and Demisting**	A helmet-mounted fan shall provide effective ventilation. Its control unit shall be within easy reach of the bomb technician. The system shall include an integrated and effective demisting arrangement.
8	**Two-Way Communication System (Wired and Wireless)**	The system shall provide two-way communication by radio and wire between the operator and base station, up to a minimum distance of 100 m in wired mode and 200 m in wireless mode (LOS). Built-in microphones and headphones/integrated radio communication in the helmet shall facilitate clear communication between the bomb technician and commander without compromising the bomb technician's comfort. • Hands-free wireless communication (VOX) without the use of PTT • Minimum wireless range: 200 m • Hard-wire spool: minimum 100 m for wired communication • Control module-cum-amplifier for the communication system • Recording facility for live wired communication; optional for wireless communication • Headset • Built-in microphones and headphones/integral radio communication in the helmet, facilitating clear communication between the bomb technician and commander without hindrance during the EOD task • Power supply • Minimum one front-facing live video camera • Minimum one front-facing searchlight
9	**Live Video Camera**	The helmet shall have a minimum of one front-facing HD video camera with a minimum 2-megapixel resolution, together with a minimum 10-inch monitor for live video transmission to a base station located at a distance of 200 m LOS (line of sight) and 100 m BUA (built-up area), wirelessly.
10	**Hand-Operable Arrangements**	The system shall have an integrated control panel, wearable on the wrist or positioned within easy reach of the bomb technician, to operate the helmet's various features, including light, audio and ventilation controls. No dangling wire shall exceed 15 cm.
11	**Fogging Assessment of Face Shield**	The face shield (helmet visor), together with the bomb suit, shall demonstrate acceptable performance during the fogging assessment stipulated in the MHA QRs and TDs for Bomb Suit dated 27.03.2026. *The OEM shall furnish a certificate in accordance with the NIOSH procedure specified at Para 6.19 of NIJ 0117.01, or equivalent, from an NABL-accredited/nationally accredited/internationally accredited laboratory.*

12	**Comfort and Fit During Coin-Recovery and Mobility Tests of Bomb Suit**	• During the coin-recovery test and mobility test stipulated in the MHA QRs and TDs dated 02.02.2023, the helmet shall not show any evidence of slackness or loose fitting. • During the mobility test, while the subject runs for 100 m, the subject shall be able to communicate continuously with the commander without interruption.
13	**Power Pack**	• A suitable power pack shall be provided, capable of delivering a minimum working time of 2.5 hours with all systems switched on. • The power pack shall not inconvenience or interfere with the bomb technician's ability to carry or operate other equipment or with the bomb technician's mobility. • A battery-status indicator shall be provided on the power pack or on the hand-worn controller, within the bomb technician's clear field of vision. • The battery shall be rechargeable and commercially available off the shelf. • The power pack shall provide outlets for all accessories, including the helmet.
14	**Recharging**	• Recharging shall be possible through both AC and DC chargers; suitable chargers shall be provided. • Spare batteries shall be provided.
15	**Transit Bag for Helmet and Communication System**	The helmet shall be supplied in the following transit bags/cases for handling during transportation: • Soft carrying bag • Hard case
16	**Shelf Life and Spare-Parts Support**	• Shelf life of the EOD helmet with communication system: 7 years. • Maintenance support, including spare parts for repair: 7 years. *The OEM shall provide a certificate confirming the above.*

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SPECIAL TENDER CONDITIONS

Scope: These conditions regulate technical compliance, applicability of fresh testing, Bulk Production Clearance and acceptance. They do not alter any technical requirement or prescribed test in this specification.

1. Technical Compliance with Bid

The bidder shall submit a clause-by-clause technical compliance statement against the complete technical specification along with the bid. Any deviation, if applicable, shall be specifically indicated against the respective clause. Bids without the required technical compliance statement are liable to be treated as technically non-responsive.

2. Applicability of Complete Testing Afresh

Any bidder supplying the product to OCF Avadi for the first time shall have the offered product subjected to complete testing afresh, from the beginning, against all prescribed test requirements of this specification at the specified/designated/approved laboratory, as applicable.

An existing or previous supplier offering a new product, new model, new configuration, or a product involving any change in material, construction, design, configuration, manufacturing process or technical specification shall also have the offered product subjected to complete testing afresh, from the beginning, against all prescribed test requirements. Previous validation or test reports pertaining to any other product, model or configuration shall not establish compliance for the newly offered or changed product.

For technical evaluation, the OEM shall submit the latest valid test reports/certificates from an NABL-accredited/internationally accredited laboratory, as applicable, covering:

1. Fragmentation protection
2. Performance against blast
3. Head-protection tests
4. Visor optics tests
5. Automatic decibel cut-out system
6. Fogging assessment of the face shieldand
7. Shelf-life and spare-parts support Certificate.

3. Testing During Bulk Production Clearance (BPC)/Bulk Supply

The successful supplier shall submit the latest valid test reports/certificates -Not less than 18 Months from the BID END DATE from the specified/recognized laboratory, as applicable, at the time of Bulk Production Clearance (BPC)/before commencement of bulk supply.

During BPC/bulk supply, one sample selected at random from the offered lot shall be subjected to the prescribed tests at the designated/approved laboratory to verify conformity with the tender specification.

The entire cost of testing, including sample preparation, laboratory/testing charges, transportation and all associated charges, if any, shall be borne by the supplier. Acceptance of the bulk supply shall be subject to satisfactory test results and compliance with the specified technical requirements.

4. Reference to Samples Previously Supplied and Validated at OCF Avadi

Where the bidder has previously supplied samples of the same product, same model and same configuration to OCF Avadi and those samples have been technically evaluated/validated, the bidder shall furnish complete reference details with the bid, including the date, product/model/configuration and relevant test/validation reference, wherever available.

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Such reference shall be considered only for establishing previous supply/validation status of the identical product, model and configuration. The bidder shall declare that there is no change in material, construction, design, configuration, manufacturing process or technical specification compared with the previously validated sample.

If any change is declared or observed, or if the offered product/model/configuration is not identical to the previously validated product/model/configuration, the offer shall be treated as a new/changed product and complete testing afresh shall be mandatory under Clause 2.

5. Right of OCF Avadi

Previous validation or acceptance of a sample shall not exempt the supplier from compliance with the current tender specification or from testing of the bulk supply, wherever stipulated. If Required OCF Avadi reserves the right to draw samples from the bulk supply and arrange testing to establish conformity with the tender requirements.

OCF Avadi may require complete testing afresh where the identity of the offered product/model/configuration with a previously validated sample is not established to its satisfaction, or where any change or discrepancy is noticed. The decision of OCF Avadi regarding the applicability and extent of testing shall be final and binding.

(P. SENTHIL KUMAR)
GENERAL MANAGER
FOR CHIEF GENERAL MANAGER

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