SCBA (Self Contained Breathing Apparatus)

SN.	Technical Specifications
	General:- A Breathing Set with spare cylinder (or SCBA) is personal protective equipment designed to provide respiratory protection in environments where the air quality is compromised. It is used by rescuers where the presence of hazardous gases, smoke, or lack of oxygen poses a significant threat to human health. The Breathing Set with spare cylinder (or SCBA) comprises a facepiece, a high-pressure tank containing compressed breathing air, a regulator, and associated components. The facepiece protects from inhalation of harmful substances. The high-pressure tank stores breathable air and the regulator control the flow and pressure of the air supplied to the user. The self-contained, Positive pressure and open circuit air breathing apparatus must be holding NIOSH/EN/ BIS 10245 (Part 2) : 1994
1)	**Back Plate and Body Harness :** This shall be made of non - metallic, antistatic, impact, chemical & fire-resistant material and orthopedically designed and manufactured in conformity of EN/US/BIS 10245 (Part 2): 1994 standards and certified for use by the fire fighters, it shall facilitate mounting at air cylinder through Cam lock. The body harness shall be wearer friendly and safe for carrying load while all buckles shall be quick release type. **In addition, following state of the art features should have in the harness –** (a) Comfortable padding conforming BIS 10245 (Part 2) : 1994 Annexure 'A' (b) Extremely robust cover fabric to withstand repeated exposure to flame and heat (NFPA/ BIS 10245 (Part 2) : 1994 – Point 5.2.10) (c) Robust adjustment buckles (d) Integrated stand-by support for demand valve
2)	**Pressure reducer :** This shall be so designed so as to meet the air demand for two users simultaneously at a stable pressure on the outfit with inlet pressure varying from 300 bars to 20 bars. Pressure reducer shall confirm to provisions in EN 137 2002 class II/ BIS 10245 (Part 2) : 1994 – Point 5.2.16
3)	**Face Mask :** i. The face mask shall be reverted edge seal type and made of flame resistant material confirming to EN 136/ BIS 10245 (Part 2) : 1994 – Point 5.2.8 **&** IS-14166 1994 ii. The reflex seal on the outer mask shall be so designed so as to facemask to reduce dead space, speech transmitter for clear voice reproduction and a wide-angle panoramic vision visor made of Polycarbonate material and shall be self-de-misting type. ii. Back Plate and Body Harness: This shall be made of non - metallic, antistatic, impact, chemical & fire-resistant material head straps shall be easy to tighten and quick to release. **In addition, the following features should be available in Face Mask -**

SN.	Technical Specifications
	a) Open port technology for free breathing when in stand-by (demand valve not attached) b) Huge field of vision for unobstructed view c) Low profile for less snagging and improved weight distribution d) All components easily accessible and interchangeable for easy maintenance and cleaning; Available in 3 sizes e) Choice of fabric based harness
4)	**Demand Valve :** The lung operated demand valve design shall either be tilting diaphragm type or piston type. This shall be provided on the facemask and connected to the pressure reducer with the help of rubber hose through quick connector. The demand valve shall be rated for minimum 500 LPM airflow and shall activate with the first breath. Must conform (BIS 10245 (Part 2) : 1994 – Point 5.2.12)
5)	**Pressure gauge with Electronic Signalling and Warning System (PASS):** This shall be bourdon pressure gauge with luminescent dial with reassure marking in bar and with a full electronic type signalling and warning unit and encased in fire resistant rubber cover. **Analogue pressure** gauge should work independently of the digital Alarm Cum Signalling Unit and even in case of non-functioning of Digital Unit, Analogue pressure gauze should give warning in case of low air pressure. The gauge shall be connected to pressure reducer through non-metallic rubber hose. The integrated control unit shall be mounted on the shoulder of the wearer in a way that it is readable to the wearer conveniently.
6)	**Hoses :** The low pressure hoses shall be flexible and non-kinking type and suitably reinforced to with stand 30 bar air pressure while the high-Pressure hoses shall either be flexible or rigid metallic tube suitably secured to the back plate so as not to obstruct the movement of the wearer.
7)	**Warning Whistle :** This shall be fitted either on the back plate or provided along with the pressure gauge assembly and shall be automatic in operation giving audible alarm of minimum 90 dB intensity at 01 Meter distance of low cylinder pressure in the range of 55 +/-5 Bar.
8)	**"Y" Manifold for additional connections:** This set shall have provision through suitably placed "Y" manifold to facilitate receiving air from a different source and supplying air for additional facemask.
9)	**Air Cylinder :** This shall be corrosion and impact resistant and made of light alloy fully wrapped. The size of the cylinder shall be such that it can hold sufficient quantity of air (Not less than 1800 Litres) for providing 45 minutes total working duration when charged at 300 bars pressure. The cylinder shall be provided with cross flow valve. The cylinder shall be duly approved by the Chief Controller Explosive Nagpur and shall be capable of withstanding a minimum hydraulic testing pressure of 450 bars.

SN.	Technical Specifications
	The cylinder shall be provided with cross flow valve and EN 144-2 compliant/ BIS 10245 (Part 2) : 1994 – Point 5.1
10)	**Weight** : The weight of the ready to use set shall not be more than 12.5 kgs.
11)	**APPROVAL**: The complete set shall have relevant EN/BIS approval BIS 10245 (Part 2) : 1994 and certificate to this effect shall be furnished by the firm.
12)	**TECHNICAL EVALUATION**:- The technical evaluation of the SCBA shall be subjected to the following:- Meeting the requirement as mentioned from S.No. 1 to 3. Designed in conformity to EN/US/BIS standards, conformity certificate and CCOE certificate to be submitted along with the offer.
13)	**TRAINING** One day base workshop level training to NDRF personnel in OEM/Firm premises/Location in India on operation and maintenance.
14)	**Guarantee/ warranty/ Service support :- d**02 Year warranty + 08 Year Service support
15)	**MANUALS AND LITERATURES:-** The following should be provided with the equipment i. User Operation Manual/technical Manual ii. Detailed operators instructions. iii. Technical literature iv. Maintenance manual, v. Inspection standards be provided with the equipment
16)	**Feature:-** **(a) Optional Head-Up-Display LEDs:-** Optional Head-Up-Display LEDs, located in demand valve, display pressure, system and alarm status unobtrusively and without work interruption. Signals delivered through the line to the demand valve and continue to the inside of the mask through light pipes **(b) Optional Voice Projection System –** Integrated microphone picks up voice inside the mask independent of environmental conditions and a speaker attached to the SCBA set is used to give clear audio.
17)	**Accessories:-** 1.2 meter medium pressure line in pouch on hip.

DIRECTORATE GENERAL NATIONAL DISASTER RESPONSE FORCE
NDCC-II BUILDING, 6th FLOOR, JAI SINGH ROAD,
NEW DELHI-110 001

CORRIGENDUM NOTICE NO. 07
(Consisting of 01 page only)

No. 1-17018//Proc/1265/HQ-NDRF/2025/ 1216 Dated, the 25 April, 2025

Reference to this NDRF HQ GeM Bid No. GEM/2025/B/5904125 dated 28/02/2025 in c/w Procurement of 503 Nos BA Set with Spare Cylinder for NDRF Bns.

2. In partial modification of this NDRF HQ GeM Bid No. GEM/2025/B/5904125 dated 28/02/2025 is as under: -

S/No	FOR CLAUSE (Technical Specifications)	READ AS
1.	**General: -** A Breathing Set with spare cylinder (or SCBA) is personal protective equipment designed to provide respiratory protection in environments where the air quality is compromised. It is used by rescuers where the presence of hazardous gases, smoke, or lack of oxygen poses a significant threat to human health. The Breathing Set with spare cylinder (or SCBA) comprises a face-piece, a high-pressure tank containing compressed breathing air, a regulator, and associated components. The face-piece protects from inhalation of harmful substances. The high-pressure tank stores breathable air and the regulator control the flow and pressure of the air supplied to the user. The self-contained, Positive pressure and open circuit air breathing apparatus must be holding NIOSH/EN/ BIS 10245 (Part 2) : 1994	**General: -** A Breathing Set with spare cylinder (or SCBA) is personal protective equipment designed to provide respiratory protection in environments where the air quality is compromised. It is used by rescuers where the presence of hazardous gases, smoke, or lack of oxygen poses a significant threat to human health. The Breathing Set with spare cylinder (or SCBA) comprises a face-piece, a high-pressure tank containing compressed breathing air, a regulator, and associated components. The face-piece protects from inhalation of harmful substances. The high-pressure tank stores breathable air and the regulator control the flow and pressure of the air supplied to the user. The self-contained, Positive pressure and open circuit air breathing apparatus must be holding NIOSH/EN/ BIS 10245(Part 2): 2023
2.	**Pressure reducer:** This shall be so designed so as to meet the air demand for two users simultaneously at a stable pressure on the outfit with inlet pressure varying from 300 bars to 20 bars. Pressure reducer shall confirm to provisions in EN 137 2002 class II/ BIS 10245 (Part 2) : 1994 – Point 5.2.16	**Pressure reducer:** This shall be so designed so as to meet the air demand for two users simultaneously at a stable pressure on the outfit with inlet pressure varying from 300 bars to 20 bars. Pressure reducer shall conform to provisions in EN 137 / BIS 10245(Part 2): 2023-Class I
3.	**Face Mask:** i. The face mask shall be reverted edge seal type and made of flame resistant material confirming to EN 136/ BIS 10245 (Part 2) : 1994 – Point 5.2.8 & IS- 14166 1994 ii. The reflex seal on the outer mask shall be so designed so as to facemask to reduce dead space,	**Face Mask:** i. The face mask shall be reverted edge seal type and made of flame resistant material confirming to EN 136/ BIS 10245 (Part 2) : 1994 – Point 5.2.8 & IS- 14166 1994 ii. The reflex seal on the outer mask shall be so designed so as to facemask to reduce dead space, speech transmitter for clear voice reproduction and a wide-angle

	speech transmitter for clear voice reproduction and a wide-angle panoramic vision visor made of Polycarbonate material and shall be self-de-misting type. iii. Back Plate and Body Harness: This shall be made of non - metallic, antistatic, impact, chemical & fire-resistant material head straps shall be easy to tighten and quick to release. **In addition, the following features should be available in Face Mask -** a) Open port technology for free breathing when in stand-by (demand valve not attached) b) Huge field of vision for unobstructed view c) Low profile for less snagging and improved weight distribution d) All components easily accessible and interchangeable for easy maintenance and cleaning; Available in 3 sizes e) Choice of fabric based harness	panoramic vision visor made of Polycarbonate material and shall be self-de-misting type. iii. Back Plate and Body Harness: This shall be made of non - metallic, antistatic, impact, chemical & fire-resistant material head straps shall be easy to tighten and quick to release. **In addition, the following features should be available in Face Mask -** a) Open port technology for free breathing when in stand-by (demand valve not attached) b) Huge field of vision for unobstructed view c) Low profile for less snagging and improved weight distribution d) All components easily accessible and interchangeable for easy maintenance and cleaning. Firms to provide facemasks in universal sizes as per BIS/ EN standards that would fit in all shapes and sizes of faces whether small, medium or large. e) Choice of fabric based harness Face mask should have built in provision for attachment of communication/ Radio set with face mask with the following provisions communication so that: Attachment for communication set with separate PTT button to be provided for ease of operation.
4.	Delivery Days 90 days	Delivery Days 120 days
5.	Trial Directives: - "BOO to physically check the parameter and verify through lab test reports from govt./ NABL approved labs for conformity with the required standard"	BOO to physically check the parameter and verify through lab test reports from govt./ NABL approved labs/International Lab for conformity with the required standard"- Applied wherever test report requested in TDs

3. As per GeM Category Specification following is amended: -

S/N	Specification	Specification Name	FOR CLAUSE	READ AS
1.	Material & Components	Air Cylinder materials (Non Corrosive Type)	Carbon Composite with PET Liner	Air Cylinder material (Non-Corrosive Type) Carbon Composite with PET Liner / Aluminum alloy liner

Note: - Remaining terms and conditions of the GeM bid will remain unchanged & Corrigendum Notice No. 979 dated 02/04/2025 treated as cancelled.

25/4/25

(Deepak Talwar)
Second-In-Command(Prov/Proc)
HQ NDRF, New Delhi.
For and on Behalf of President of India