

मुख्यालय राष्ट्रीय सुरक्षा गारद
गृह मंत्रालय (भारत सरकार)
सम्भरण शाखा (आयुद्ध अनुभाग)
मेहरम नगर, पालम, नई दिल्ली-37

लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0) और परीक्षण निर्देशों (टी0डी0) के मसौदे को गृह मंत्रालय की वेबसाइट पर डालना

1. कृपया गृह मंत्रालय, पीएम डिविजन के पत्र सं. IV-24011/12/2011-Prov.I दिनांक 05 अक्टूबर 2016, पत्र सं. IV-24011/12/2011-Prov.I दिनांक 13 जून, 2012 और पत्र सं. 11012/ 02/2009-Fin-I/ Prov-I-17 दिनांक 02 जनवरी, 2018 का संदर्भ लें।
2. लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0) और परीक्षण निर्देशों (टी0डी0) में संशोधन के लिए तकनीकी विशेषज्ञों के उप समूह की बैठक मुख्यालय राष्ट्रीय सुरक्षा गारद में दिनांक 21 अप्रैल 2026 को 1500 बजे आयोजित हुई।
3. बैठक के दौरान उप समूह ने कहा कि विक्रेताओं की टिप्पणियों/सुझावों को आमंत्रित करने के लिए लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0) और परीक्षण निर्देशों (टी0डी0) के मसौदे को 15 दिनों के लिए राष्ट्रीय सुरक्षा गारद के साथ-साथ गृह मंत्रालय की वेबसाइट पर डाला जाए।
4. पीएम डिविजन के उपर्युक्त संदर्भित पत्रों के अनुसार लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0) और परीक्षण निर्देशों (टी0डी0) का मसौदा संलग्न परिशिष्ट के अनुसार गृह मंत्रालय की वेबसाइट पर डालने हेतु प्रिंटेड कॉपी तथा सॉफ्ट कॉपी में भेजा जा रहा है।


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संलग्नक : उपर्युक्त

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No. P/604/389/25/389/MROV/Prov(Ord)/HQ NSG/E-166814/2812 दिनांक : 28 अप्रैल 2026

लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0)/ परीक्षण निर्देशों (टी0डी0) के मसौदे पर विक्रेताओं की टिप्पणियों का आमंत्रण

1. आपको सूचित किया जाता है कि लघु दूर-संचालित वाहन (Mini Remotely Operated Vehicle (MROV)) के परिशोधित गुणात्मक आवश्यकता (क्यू0आर0) और परीक्षण निर्देशों (टीडी) के मसौदे पर फर्मों/विक्रेताओं की टिप्पणियां आमंत्रित है। सभी फर्मों से निवेदन है कि नीचे दिए गए प्रारूप में वे अपनी टिप्पणियां भरकर **OEM Certificate** सहित ई-मेल पता **scord@nsg.gov.in** या **gcproc@nsg.gov.in** पर भेजें।

गुणात्मक आवश्यकता (क्यूआर)	परीक्षण निर्देश (टीडी)	फर्म द्वारा टिप्पणियां

2. आपसे अनुरोध है कि वेबसाइट पर प्रदर्शित होने की तारीख से 15 दिनों के भीतर अपनी टिप्पणियां भेजें। उप समूह कमेटी की बैठक में उपर्युक्त हथियार के गुणात्मक आवश्यकताओं/परीक्षण निर्देशों को अंतिम रूप देने पर विचार किया जा रहा है।



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दिनांक : ५ अप्रैल 2026

DRAFT REVISED QRs & TDs OF MINI REMOTELY OPERATED VEHICLE (MROV)

S No	Parameters	QRs/ Specification	Trial directives
1.	EOD surveillance	The Mini ROV should be able to carry out EOD and surveillance of the following structures/ installation:- (a) Inside aircraft and train. (b) Building and installation. (c) Bus station/Metro station/ Rly stn. (d) Passenger Terminals. (e) On ferries and ships. (f) Exterior and interior of all types of vehicles.	To be physically checked by the BOO.
2.	Weight of Mini ROV	The operational unladen weight of Mini ROV including control unit and battery should not be more than 110 kg.	To be physically checked by the BOO.
3.	Climbing of Mini ROV	Mini ROV should be able to climb up and down stair case of standard dimension and slope of at least 45 degree along with minimum weight of 8 Kg and should have provision of varying speeds for negotiating stairs/slope with and without load. The ROV should not topple while negotiating the stairs/ slope.	Mini ROV to be operated to climb up and down a stair case/ slope of at least 45 degree along with weight of 8 kgs.
4.	Boom extension	The telescope boom of Mini ROV should extend minimum 01 mtr and max 2.5 mtr or more from the ground/floor level and it should be modular/ fixed in nature.	To be physically checked by the BOO.

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S No	Parameters	QRs/ Specification	Trial directives
5.	<p>Cameras</p> <p>(a) Front and rear video cameras</p> <p>(b) PTZ fusion (day & night) camera</p> <p>(c) Video camera at claw</p> <p>(d) Aiming video camera</p>	<p>The Mini ROV should have the following video cameras:-</p> <p>Front and rear video cameras with IR capabilities and range of minimum of 3 meters.</p> <p>(a) Resolution : Minimum Full HD (b) Field of View : $\geq 120^\circ$ wide-angle</p> <p>PTZ fusion (day & night) camera having Tilt (-90 to $+90$ degrees) and PAN (0-360 degrees) with capabilities to recognize human form factor at minimum 200 meters.</p> <p>(a) Resolution : Full HD (1920\times1080) or higher (b) Optical Zoom: ≥ 30 (c) PAN : Continuous 360$^\circ$ rotation (d) Tilt : -90° to $+90^\circ$ (e) Low Light Performance : Starlight CMOS or equivalent (f) Image Stabilisation : Electronic Image Stabilisation (EIS) (g) Autofocus & Auto Exposure for dynamic scenes</p> <p>Optional : The camera should be programmed for target tracking</p> <p>Video camera at claw with thermal capability with capability to recognize human form factor at minimum 200 meters.</p> <p>(a) Thermal imaging capability (integrated or auxiliary) (b) Detection range-Human form factor at min 200 mtrs. (c) Optional laser pointer or digital scale overlay for depth perception.</p> <p>Aiming video camera for firing with IR capability and range of minimum 10 meters.</p> <p>(a) Resolution : Minimum Full HD (b) IR capability for night operations (c) Shock isolated mounting (d) Digital bore sight / alignment calibration capability</p> <p>De Armr disrupter to be provided by the user.</p>	<p>In addition to certificates from the OEM the parameters to be physically checked by the BOO.</p> <p>To be physically checked by the BOO. Firing of De Armr disrupter to be carried out.</p>







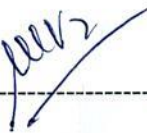














S No	Parameters	QRs/ Specification	Trial directives
6.	Attachments	The Mini ROV should have the following attachments:-	
	(a) Weapon mounting system	Modular mount for SMG/AK-47 or similar weapons system to be specified by the user to be provided. The wpn & Amn will be provided by the indenter.	To be physically checked by the BOO by firing five rounds of Amn each from SMG/AK-47 or similar weapons system.
	(b) De-Armr Disrupter mounting	Modular mount for De-Armr Disrupter to be provided.	To be physically checked by the BOO.
	(c) RTVS mounting	Modular mount for RTVS to be provided (Should be capable to take X-Ray with RTVS).	To be physically checked by the BOO.
7.	Laser aiming	Mini ROV should be able to aim with the help of both the camera and the laser aiming pointer.	To be physically checked by the BOO.
8.	Lifting capability	Mini ROV should have a lifting capability of minimum 8 kgs with telescopic boom fully extended.	To be physically checked by the BOO.
9.	Spot lights/ LED	The Mini ROV should have spot lights/ LED for both driving cameras and for aiming camera should be compatible with video camera.	In addition to certificates from the OEM the parameters to be physically checked by the BOO.
10.	Malfunction detection	The Mini ROV should have a malfunction detection and display unit.	To be physically checked by the BOO.
11.	Use of COFDM technology	Use of COFDM technology in data, audio & video transfer between the ROV and the base station.	OEM certificate for compliance will be the acceptance criteria.
12.	Optimum output	The Mini ROV should be able to give its optimum output in the under mentioned areas/ ranges:-	
	(a) Urban/ Built up area	Radio control in urban/ built up area up to 200 m.	To be physically checked by the BOO.
	(b) Open area	Radio control in open area up to 1000m.	To be physically checked by the BOO.
	(c) Fiber optic control	Fiber optic control min-upto 200m with self-retractable cable assembly.	To be physically checked by the BOO.
	(d) Taking X-Ray	Capability to take X-Ray with X-Ray mount assembly/ Real Time Viewing System in all terrains.	To be physically checked by the BOO.

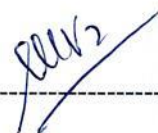














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13.	EMI/EMC compatibility	The Mini ROV should be EMI/EMC compatible.	OEM to furnish certificate from any national/ international accredited lab.
14.	EOD options/ resources	Mini ROV should have the following EOD options/ resources with the claw:-	
		Pipe holding grip.	To be physically checked by the BOO.
		Spike grip.	To be physically checked by the BOO.
		Beak grip.	To be physically checked by the BOO.
		Box cutter.	To be physically checked by the BOO.
		Glass breaker.	To be physically checked by the BOO.
		Tyre Deflator.	To be physically checked by the BOO.
		Line for towing veh.	To be physically checked by the BOO.
15.	Power supply	The power supply of the Mini ROV should have the following:-	
	(a) Rapid recharge	Rapid rechargeable lithium-ion or better battery.	To be physically checked by the BOO.
	(b) Battery compatibility	The battery should be able to support all ops of the Mini ROV for a continuous duration of not less than 04 hours.	Mini ROV to be physically operated on battery for more than 04 Hrs.
	(c) Spare battery	Firm to provide spare battery for both Mini ROV and base station with charger.	To be physically checked and tested by the BOO.
16.	Microphone	Mini ROV should have a sensitive microphone to pick up acoustic signature within a radius of 15 feet of Mini ROV.	To be physically checked and tested by the BOO.









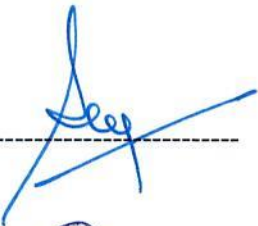




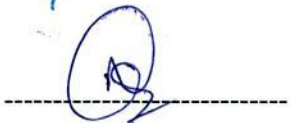

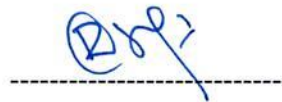




S No	Parameters	QRs/ Specification	Trial directives
17.	Base station	Base station of the Mini ROV should have the following features:-	
	(a) Weight	Compact and light weight.	To be physically checked by the BOO.
	(b) Control panel	Portable Hybrid (Wired and wireless both) control panel to be provided.	To be physically checked by the BOO.
	(c) Display unit	The display unit at base station should have LCD screen of min 15" with capability of simultaneously displaying at least 04 on board cameras in one screen and each camera output separately on the screen.	To be physically checked by the BOO.
	(d) Power	Capable of being powered on mains and bty both.	To be physically checked by the BOO.
	(e) Joystick control	Should have joystick control.	To be physically checked by the BOO.
	(f) Safety features	Should have inbuilt safety features.	To be physically checked by the BOO.
	(g) Operational controls	Should have essential operational controls.	To be physically checked by the BOO.
	(h) Listen and record the voice	Should have capability to listen and record voice signature being pickup by the microphone on board the ROV.	To be physically checked by the BOO.
	(j) Transmission of video	Should have a USB/HDMI port for transmission of surveillance feed being received from Mini ROV to command and control center.	To be physically checked by the BOO.
18.	Operating temperature	The operating temperature of the Mini ROV should be (-) 10 degree C to (+) 55 degree C	OEM to provide National / international accredited lab certificate.
19.	Carrying cases	Suitable non metallic (except Wooden) wheeled hard cases for safety of Mini ROV and associated accessories to be provided.	To be physically checked by the BOO.














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20.	Miscellaneous	Miscellaneous. The firm will provide the following documents/ literature (in English language) alongwith the equipment:- (a) Technical manual with full description of all the item. (b) User handbook (c) Literature on care and preservation technique/ methods. (d) Specifications for packing handling/ transportation/storage. (e) Details regarding periodical check to be carried out by the user for serviceability of the equipment.	(a) For technical literature, undertaking by the OEM/firm, to provide the technical literature along with the delivery of the equipment will be obtained. (b) Remaining items to be physically checked by the BOO.
21.	Laser range finder	(a) Range: Up to 100 m. (b) Displayed on operator console and recorded with imagery.	To be physically checked by the BOO.
22.	Recording, Storage & Forensic Support	(a) Time and date stamping. (b) Exportable media suitable	To be physically checked by the BOO.
23.	System Integration & Modularity	(a) Camera modules shall be modular and replaceable. Addl two parts for optional addl camera (desirable). (b) Compatible with future sensor upgrades. (c) Minimal latency during live feed transmission.	To be physically checked by the BOO.




(Sudhir Kumar Yadav)
AC, BSF



(Binay Kumar)
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Maj Lalit Kumar
TC (WE) HQ NSG



Insp/MM
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(T.G. Naidu)
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Through VC

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Maj Rajeswar Singh
BD Unit, NSG



(Satendra Yadav)
PC, SSB