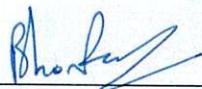

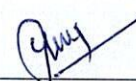
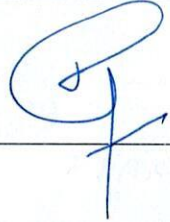
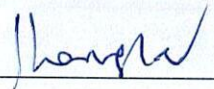




REVISED DRAFT QRs AND TRIAL DIRECTIVES OF 9 X 19 MM CARBINE

Sl.No	Parameter	QRs/Specifications	Trial Directives
1.	Introduction	The concept of Short Range Close Quarter Battle (CQB) weapon is that it should be light weight, robust, easy to use and modular	To be physically checked by the BOO
<u>OPERATIONAL PARAMETERS</u>			
2.	Caliber	9mm x 19mm	OEM to provide self certificate. BOO to physically check the calibre with gauge provided by the OEM
3.	Weight of the Carbine	Weight without magazine however with three picatinny rails should not be more than 3 kgs.	To be physically checked by the BOO
4.	Firing mode	(a) Singly and Automatic (b) Suitable change lever to select firing mode (c) Change lever should be positively locked to ensure that weapon fires in desired mode only when it is in designated position.	To be physically checked by the BOO
5.	Effective Range	The weapon should be able to effectively engage target at a range of 100 mtrs with aimed fire under normal conditions of visibility.	Five rounds will be fired from 100 meters from fix mount/ manually and minimum four rounds should hit the Fig 11 target. To be physically checked by the BOO.



31.01.19






SI.No	Parameter	QRs/Specifications	Trial Directives
6.	Muzzle Velocity	Minimum 375 m/s	(i) OEM to provide certificate from any International/ NABL accredited lab/NFSU/ DRDO labs/DGQA/ Govt. lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate to be confirmed by the BOO. (ii) The certificate will remain valid for 05 years from the date of its issue. The testing of weapon (national level) for issue of fresh certificate/ renewal after expiry of the validity period of certificate may be facilitated by tendering agency during STEC, if required.
7.	Rate of Fire	800 rounds per minute cycle rate of fire	(i) OEM to provide certificate from any International/ NABL accredited lab/NFSU/ DRDO labs/DGQA/ Govt. lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate to be confirmed by the BOO. (ii) The certificate will remain valid for 05 years from the date of its issue. The testing of weapon (national level) for issue of fresh certificate/ renewal after expiry of the validity period of certificate may be facilitated by tendering agency during STEC, if required.
8.	Accuracy	(a) At 50 mtrs (single shot) – Group size should be within 15 cms x 15 cms. (b) At 50 mtrs (short burst of two-three round)- All the rounds fired should hit within 30 cms x 30 cms area.	(i) For testing accuracy at 50 mtrs (Single Shot), figure 11 target (40cm x 70 cm) will be used & seven shots will be fired (in single shot mode) using the weapon (mounted on a fixed mount). Eight shots will be considered out of Ten. Group size should be within 15 cms x 15 cms area. (ii) For testing accuracy at 50 mtrs (short burst of two three round) figure 11 target (40cm x 70 cm) will be used & 30 shots will be fired (short burst of two/ three rounds in automatic mode) using the weapon (mounted on a fixed mount). Minimum 60% rounds should be within Group size of 30 cms x 30 cms area. (iii) Accuracy test will be carried out during field functional trial. (iv) OEM to provide firer and Target. In case OEM requests for a firer from user agency, it is to be provided only after obtaining NOC to the effect that "OEM will not question/ claim the skill of the firer & the result of trial firing will be acceptable to him". (v) Tendering agency to specify in-service ammunition & make it available for trial testing on payment basis.

Phonak

RTY

29601 60

Phun

G

Harsh

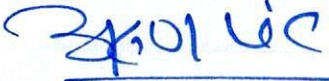
R

HT


Sl. No	Parameter	QRs/Specifications	Trial Directives
9.	Reliability	<p>(a) 1200 rounds test will be carried out.</p> <p>(b) It should not suffer from more than three Class-I or Class-II stoppages in total and No Class – III stoppages. The test is to be carried out as per Test Operations Procedure (TOP) 3-2-045 specifications.</p> <p>(i) Class-I stoppage – Can be removed by the firer within 10 seconds without the use of any tools/equipment/spares by using only immediate action drills.</p> <p>(ii) Class-II stoppage- Can be removed by the firer within 10 seconds to 10 minutes using tools/equipment/spares issued with the weapon.</p> <p>(iii) Class-III stoppage- Takes more than 10 minutes or special tools/ equipment to rectify defects and resume firing.</p>	<p>(i) A test cycle of 200 rounds will be fired in short bursts of 2 to 3 rounds.</p> <p>(ii) Weapon will be allowed to cool down for 10 minutes.</p> <p>(iii) Tests will be carried out during field functional trial & the firing will be carried out by Weapon from a fixed mount.</p> <p>(iv) Test will be carried out during field functional trial.</p> <p>(v) OEM to provide firer and Target. In case OEM requests for a firer from user agency, it is to be provided only after obtaining NOC to the effect that “OEM will not question/ claim the skill of the firer & the result of trial firing will be acceptable to him”.</p> <p>(vi) Tendering agency to specify in-service ammunition & make it available for trial testing on payment basis.</p> <p>(vii) Misfire not to be considered as stoppage.</p>
10.	Adverse Condition Test	<p>(a) Sand Test</p> <p>(b) Water Immersion Test</p> <p>(c) Mud Test</p> <p>(d) Drop Test.</p>	<p>(i) JSG 0131:2021 procedure as per para 5.1.3 to be considered for these tests (As per Annexure attached)</p> <p>(ii) OEM to provide certificate from any International/ NABL accredited lab/NFSU/ DRDO labs/DGQA/ Govt. lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.</p> <p>(iii) The certificate will remain valid for 05 years from the date of its issue. The testing of weapon (national level) for issue of fresh certificate/ renewal after expiry of the validity period of certificate may be facilitated by tendering agency during STEC, if required.</p>

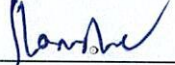
















SI.No	Parameter	QRs/Specifications	Trial Directives
11.	Environmental Conditions: (a) Operating temperature (b) Storage Temperature (c) Humidity	-40°C to +55°C -40°C to +70°C 95% RH at 25°C	(i) JSG 0131:2021/ TOP procedure as per Para 5.1.3.6 to be considered for these tests. (ii) OEM to provide certificate from any International/ NABL accredited lab/NFSU/ DRDO labs/DGQA/ Govt. lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO. (iii) The certificate will remain valid for 05 years from the date of its issue. The testing of weapon (national level) for issue of fresh certificate/ renewal after expiry of the validity period of certificate may be facilitated by tendering agency during STEC, if required.
12.	Designed for right & left handed use	The weapon should be capable of ambidextrous usage	To be demonstrated by OEM & physically checked by BOO
13.	Color	Black/olive/green/desert pattern to be specified by user at the time of tendering.	To be physically checked by the BOO
PHYSICAL PARAMETERS			
14.	Length	Overall Length- Not more than 720mm	To be physically checked by the BOO
15.	Picatinny Rail	MIL Standard 1913 Picatinny Rail integrated with the weapon on at least 3 sides (to be specified by the user) to provide interfaces for accessories like internationally available optical sights and Tactical lights/LAD.	To be physically checked by the BOO
16.	Barrel- Barrel life	Barrel life should be minimum 15000 rounds	OEM to provide self certificate. Explicit warranty of barrel to be provided by the OEM for 15000 rounds against any defect due to manufacturing fault as certified by any govt agency (other than buyer).
17.	Magazine		
	(a) Capacity	30 rounds	To be physically checked by the BOO
	(b) Material	Magazine should be either metallic with side slots to ammunition indication or see through high strength polymer/composite magazine. Magazine should be robust enough to withstand rough usage under various environmental conditions. Should not get deformed when subjected to heat during prolonged firing or in hot weather conditions.	To be physically checked by the BOO

Shankar

By

Shankar

Plus





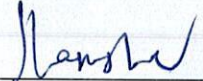

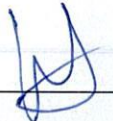
Q

Shankar

By

Shankar

Sl.No	Parameter	QRs/Specifications	Trial Directives
18.	Furniture	Should be made up of high strength polymers/ composite/ reinforced scratch proof plastic or high strength enabling environmental stability.	To be physically checked by the BOO
19.	Fore Hand Grip	Fore hand Grip should be present in the carbine	To be physically checked by the BOO
20.	Flip Up Sights	Should have mechanical flip up sights	To be physically checked by the BOO
21.	Sling	Carbine should have adjustable and robust carrying sling with quick detachment feature	To be demonstrated by OEM & Physically checked by the BOO
MISCELLANEOUS PARAMETERS			
22.	Safety	Both mechanical & applied safety.	To be demonstrated by OEM & Physically checked by the BOO
23.	Field Stopping	Weapon should be easily stripped without any tool or with minimum tools & all cleaning parts to be designated for field cleaning	To be demonstrated by OEM & Physically checked by the BOO
24.	Accessories	Requirement and quantity to be specified by the buyer/ user (a) Magazine (b) Field Cleaning Kit (c) Measurement gauge (Go & No go), CHS if any. (d) Maintenance manual in English & Hindi. (e) Technical literature in English & Hindi, Training manuals & user hand book. (f) Training material in soft copy. (g) Manufacturers recommended list of spares (MRLS) duly priced. (h) List of STFs/SMTs/ Test Jigs for repair and testing of main eqpt at field level (As recommended by OEM) (j) Illustrated spare parts list (As recommended by OEM)	Individual accessories to be demonstrated by OEM & Physically checked by the BOO



SKD UC






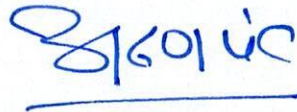
Sl.No	Parameter	QRs/Specifications	Trial Directives
25.	Training	In situ training for one week on operation, maintenance, fault finding and user level repairs at buyer's premises at their cost.	OEM to provide certificate for the same.



Bhampal, ac
ITBP



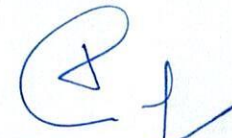
Jugraj Singh
ADDA, DGQA



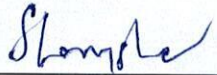
Avun Kumar Pant, ac
BSF



Vipin Sharma
IX, SSB



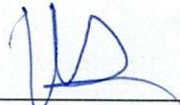
Col Atul Chopra (Retd)
RPR&D



Shambhu Singh, ac
CRPF



Capt Keena
S2SAG, NSG



Maj Clinton
SWS, NSG

Annexure
(Refer Ser No 10 of TDs of
9 x 19 mm Carbine)

Adverse Condition Test.

1. **Water Immersion Test.** This test determines the effects of water immersion on weapon performance. The test consists of a single immersion followed by firings.

(a) Requirement of Stores.

(i) Weapon - 01 No.

(ii) Ammunition - 10 Rds filled in a magazine.

(b) Procedure.

(i) Clean and lubricate the weapon. Close the muzzle end of weapon by muzzle cap or tape. Integral ejection port cover, if any, will also be closed. Fill the magazine with 10 rds. Feed the magazine with the weapon. Load ammunition in the barrel chamber by cocking.

(ii) Engage the safety catch in "safe" position.

(iii) Immerse the weapon in water with depth 1 m for 30 minutes in horizontal orientation. After completion of soaking period, remove the weapon from water. Open Muzzle Cap. Drain water from the weapon.

(iv) Fire 10 rds, 50% in single shot mode within 10 seconds and remaining in Auto/ Burst mode.

(c) Observation – There should not be any class II or Class III stoppage during firing.

Notes

1. In case of non-auto weapon, complete magazine to be fired in single shot mode within 15 seconds.


2. Record all damages & stoppages, if any.

2. **Mud Test.** This test determines the effects of mud on weapon performance.

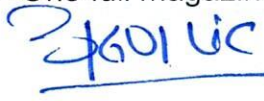
(a) Requirement of Stores

(i) Weapon – 01 No.

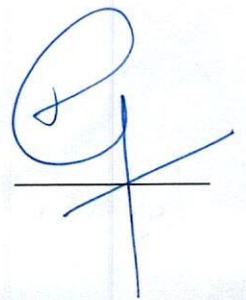
(ii) Ammunition – One full magazine with live rounds.



















(iii) Garden soil - 150 kg Approx. The soil is to be dried and passed through a sieve having 300 micron size.

(iv) Tank – 01 No (Size : L150 cm X B100 cm X H110 cm).

(v) Ground Water (As per requirement).

(b) Preparation of Mud Bath – Mud bath is to be prepared by using 25% garden soil and 75% clean water by volume. The garden soil is to be dried and passed through a sieve having 300 micron size.

(c) Procedure

(i) Clean & lubricate the weapon. Close the muzzle end by muzzle cap or tape. Integral ejection port cover, if any will also be closed. Feed the full magazine with the weapon. Load ammunition in the barrel chamber by cocking.

(ii) Engage Safety Selector in "SAFE" position.

(iii) Hang the weapon in horizontal orientation in the mud chamber in such a manner that it is fully immersed in the mud bath upto half way down from the surface of mud solution for a period of 01 minute.

(iv) After 01 minute, remove the weapon from mud bath. Weapon will be jerked by keeping the muzzle downwards. Wipe outer surfaced of weapon with bare hands to remove excess mud. Open muzzle end. Disengage Safety Selector.

(v) Fire 05 rds in single shot mode.

(d) Observation – Weapon should not suffer from more than once Class II stoppage. No Class III stoppages are permitted.

Note : Record all damages & stoppages, if any.

3. **Sand & Dust Test.** Sand and Dust are part of the natural environment in which small arms must operate. The adverse effects of sand and dust include physical interference with moving parts, effects functioning and wear/ abrasion.

(a) Requirement of Stores.

(i) Weapon - 01 No.

(ii) Ammunition - One full Magazine with live rounds.

(iii) Sand dispensing Equipment - As per requirement.

Bhargava

[Signature]

2401 UC

[Signature]

[Signature]

Sharma

[Signature]

[Signature]

- (iv) Sand - Grains sizes (Details given at Para (b) below).
- (v) Steel Sieve - 05 No (Sieve size Approx 40, 45, 100, 250 & 300 micron – Qty 01 each).
- (b) Preparation of SAND/ DUST - A mixture of sea/ river sand with
 - (i) 30% by weight of sand size less than 40 micron.
 - (ii) 20% by weight of sand size less than 45 micron.
 - (iii) 15% by weight of sand size less than 100 micron.
 - (iv) 15% by weight of sand size less than 250 micron.
 - (v) 20% by weight of sand size less than 300 micron.
- (c) Procedure
 - (i) Prepare Sand / Dust mixture.
 - (ii) Mount the weapon fitted on fixed shooting rest. Feed the full magazine with the weapon. Load ammunition in the barrel chamber by cocking. Turn on the dust dispenser and operate for one minute.
 - (iii) Then initiate weapon firing. Fire 50% of one full magazine in single shot within 15 seconds and remaining in Auto/ Burst mode. Continue to dispense the dust mixture until firing is complete.
- (d) Observation – Weapon should not suffer from any Class II or Class III stoppages.

4. **Drop Test.** This test is designed to simulate the rough handling experienced by small arms in use by an individual Soldier. The test includes a 1.5 meter (5ft) drop to represent accidental dropping of the weapon during combat or during mounting/ dismounting operations. This test is likely to damage the test items; therefore, it should be done near the end of the overall test sequence.

- (a) Requirement of stores
 - (i) Weapon – 01 No.
 - (ii) Primed Cartridge w/o Propellant – 05 Nos.
 - (iii) Ammunition - One full magazine with inert inspection rounds. One full magazine with live rounds.

<u>Photo</u>	<u>[Signature]</u>	<u>31501 UC</u>	<u>[Signature]</u>	<u>[Signature]</u>
<u>Sample</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>_____</u>	<u>_____</u>

(iv) Steel Tape – 01 No. (Measuring upto 200 cm).

(b) Procedure – Load one weapon with Primed Cartridge without propellant into the chamber. Fit the inert inspection full magazine with the weapon. Engage the safety catch in "SAFE" position. Drop the weapon from 1.5 m height from a wooden stand onto a clean, level and hard mud surface. The weapon is to be dropped in five orientations as given below.

- (i) Major axis horizontal (normal firing orientation).
- (ii) Major axis vertical, butt down.
- (iii) Major axis vertical, muzzle down.
- (iv) Major axis 45° from vertical, butt down.
- (v) Major axis 45° from vertical, muzzle down.

(c) Observations

(i) After each drop

(aa) Primed cartridge after each drop test should not get fired.

(ab) Ascertain the position of the Safety Selector switch. It must remain in "Safe" position.

(ac) Primed cartridge without propellant after each drop test will be fired to ascertain whether the primer actuated during drop or not.

(ii) After all the drops

(aa) Verify the hand functioning & serviceability of weapon by applying gauges supplied by OEM. After acceptance, fire 50% of one full magazine in single shot within 15 seconds and remaining in auto mode.

(ab) Crack/ Damage/ Breakage will be treated as non-compliant if it affects functioning of weapon in firing. (There must be no Class II or Class III stoppages)

Notes

1. In case of non-auto weapon, fire all round in single shot mode within 30 seconds.

2. Record all damages & stoppages, if any.

