

DIRECTORATE GENERAL NATIONAL SECURITY GUARD
OPERATIONS BRANCH (WE SEC)

1. Formulation of QR/TDs for **36 Hand Grenade Simulator** as per Appx att are being contemplated.
2. OEM/Firms are requested to forward their comments/suggestions on the draft QR/TDs as per proforma given below alongwith the details (product specifications, pectoral's etc) of their product meeting the referred QRs.
3. It is requested that comments if any on the QRs may please be forwarded to the under mentioned within 30 days.

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DRAFT QUALITATIVE REQUIREMENT (QRs) OF 36 HAND GRENADE SIMULATOR

GENERAL REQUIREMENTS

1. The Hand Grenade Simulator should provide exact feel and experience of handling a real and genuine "Grenade hand 36M HE" which is manufactured by Ordnance Factory.
2. The simulator should have adequate safety measure while handling.
3. The simulator should support as a training aid for grenade throwing and lobbing.
4. The trainee must feel that a genuine grenade comparable in weight, shape and size of "Grenade hand 36M HE" is being used.
5. The blast sound, smoke and waves generated by the Simulated Grenade should be identical to that of real grenade 36M HE.
6. The simulated grenade must not fragment and should be available for reuse for subsequent training of personnel.
7. The Simulated Grenade may be used repeatedly for a number of times.

TECHNICAL DETAILS

1. Grenade should be made of a material, which gives the feel like that of a real hand grenade. The material should help in absorbing the shock, so that the shell of the simulated grenade does not give way.
2. A safety vent is used as an opening for the purpose of insertion of ammunition in a original grenade but in a Simulated Grenade, there should be a dummy opening and it should be used as safety vent.
3. A detachable guide tube should be available in the Simulated Grenade so that it may be cleaned as and when required and may be replaced with a new one in case of any necessity.
4. The base plug should be available to close the base opening of the simulated grenade shell. The base plug should help not only in closing the base opening but should also be tough enough to take the impact load.
5. Simulated Grenade should have option of being fired from a rifle launcher.
6. Simulation should be facilitated with all types of time blasting fuses so that training can be given on all types grenades available with world forces.
7. It should provide reflex action training so to train soldiers to attack a grenade thrown at him by militant/terrorist and clear it way.

TECHNICAL SPECIFICATION

(a) **Size.**

- | | | | |
|--------|-----------------------------------|---|---|
| (i) | Length | - | 9cm (90mm \pm 5mm). |
| (ii) | Diameter | - | 6cm (60mm \pm 3mm). |
| (iii) | Shape | - | Cylinder (Link Hand Grenade) |
| (iv) | Weight | - | Should resemble.
(App 790 gms \pm 10 gms total assembly) |
| (v) | Sound | - | Close to actual grenade. |
| (vi) | Feel | - | Same as original i.e. 36 M Hand Grenade. |
| (vii) | Actuation | - | Spring loaded. |
| (viii) | Time between pin striking and log | - | Amply safe. |

(b) **Blast After Throwing/ Lobbying of Launching from Rifle.**

- | | | | |
|-------|-------------------------|---|--|
| (i) | Hand Grenade | - | 4 secs. |
| (ii) | Rifle Grenade Launching | - | 7 secs. |
| (iii) | Type of Cartridge used | - | Pyrotech cartridge
(Additional 5 sets extra). |

- (c) Each sets should have at least 100 shells and 4000 cartridge.

OTHER REQUIREMENTS

1. Firms participating will indicate the warranty period of equipment alongwith details of repair/AMC facility in India. Minimum warranty 02 yrs.
2. If required, a functional demonstration would be conducted within specified duration as deemed fit by competent authority from date of opening tender and participating firms should ensure and present with product for same within stipulated period.

TECHNICAL SPECIFICATION

1. Replica of actual grenade.
2. Not a Dummy Grenade.
3. Non fragmenting grenade.
4. Creates flash, blast, smoke and shock.
5. Simulates shape, components, weight, explosion timing and sounds.
6. Reusable upto 80 – 100 times.
7. Allow arming and disarming drills of grenade in actual.
8. No casualties or injuries.
9. Grenade can be fired with a rifle.
10. Trainees can lob grenade simultaneously.
11. Save time and efforts.
12. Negligible running cost of operating.
13. It should be conducted even in a limited open area or within unit area.
14. It should allow 24x7 training in restricted space, saving time and logistics.
15. No restriction of minimum number of personnel required to commence training.
16. Easy portability enabling frequent movement to impart training to all.
17. Realistic training.
18. Capability to raise training standards across the board with minimum cost.

DRAFT TRIAL DIRECTIVES OF 36 HAND GRENADE SIMULATOR

Ser No	Features	QRs	Remarks (Method of trials)
<u>TECHNICAL SPECIFICATION</u>			
<u>Size :-</u>			
1.	Length	9cm (90mm \pm 5mm).	To be checked by BOO.
2.	Diameter	6cm (60mm \pm 3mm).	To be checked by BOO.
3.	Shape	Cylinder (Link Hand Grenade)	To be checked by BOO.
4.	Weight	Should resemble. (App 790 gms \pm 10 gms total assembly)	To be checked by BOO.
5.	Sound	Close to actual grenade.	To be checked by BOO.
6.	Feel	Same as original i.e. 36M Hand Grenade.	To be checked by BOO.
7.	Actuation	Spring loaded.	To be checked by BOO.
8.	Time between pin	Amply safe.	To be checked by BOO.
<u>Blast After Throwing/ Lobbying of Launching from Rifle :-</u>			
10.	Hand Grenade	4 secs	To be checked by BOO.
11.	Rifle Grenade Launching	7 secs	To be checked by BOO.
12.	Type of Cartridge used	Pyrotechnic cartridge (Additional 5 sets extra).	To be checked by BOO.
13.	One set should have shells & cartridge	100 shells and 4000 cartridge.	To be checked by BOO.

Ser No	Features	QRs	Remarks (Method of trials)
<u>Other features</u> :-			
14.	Warranty	Minimum warranty 02 yrs	The firm should provide the cert.
15.	Replica of actual grenade	(i) Replica of actual grenade. (ii) Not a Dummy Grenade. (iii) Non fragmenting grenade.	The firm should provide the cert.
16.	Reusable	Upto 80 – 100 times.	To be checked by BOO.
17.	Arming and disarming drills	Allow arming and disarming drills of grenade in actual.	To be checked by BOO.
18.	Grenade can be fired with a rifle	Yes	To be checked by BOO.