

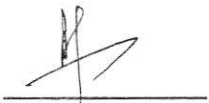
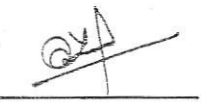




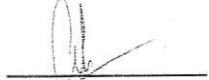
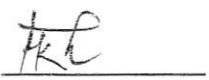


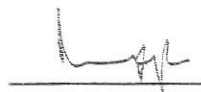
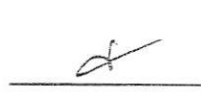
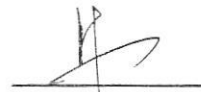

REVISED QRS/SPECIFICATIONS OF 30MM AUTOMATIC
GRENADE LAUNCHER





Ser No	Specification	Parameters
1.	Operating/ Loading	The AGL should preferably be belt fed and operate on blow back action and be air cooled
2.	Calibre	30 mm
3.	Range	Effective range should not be less than 1700 meters by direct and indirect fire. Aimed fire with open sight should not be less than 800 meters and with telescopic sight 1000 meters. In indirect mode, it should be able to engage targets effectively at all ranges in low as well as high angle.
4.	Accuracy	The accuracy of the weapon should be comparable with that of the available weapons in the same class. The accuracy at max range should be $A \leq 1/70$ and $B_0 \leq 15m$.
5.	Type of Fire	The weapon should fire in automatic mode and it should also fire single shots when fired in controlled burst.
6.	Barrel	Life of Barrel should be minimum 4000 Grenades.
7.	Rate of Fire	(a) Rapid - Not less than 70 rounds per minute. (b) Cyclic - 350 - 400 rounds per minute.
8.	Magazine box	The ammunition should be belt fed from a magazine box of 30 rounds.
9.	Traverse	The weapon should be able to traverse on its mount to cover at least 30 degree frontal arc. It should have the facility of free and controlled traverse.
10.	Elevation	Free as well as controlled elevation arrangements should be provided in its mounting. It should also have an depression/elevation from -5° to $+70^\circ$
11.	Design	The weapon should be so designed that it can be stripped without the need of any special tools.


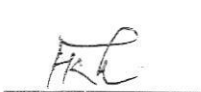


			
			
			





REVISED QRS/SPECIFICATIONS OF 30MM AUTOMATIC GRENADE LAUNCHER (Contd....)

<u>Ser No</u>	<u>Specification</u>	<u>Parameters</u>
12.	Sighting system	Launcher Sight - To be used for laying the launcher when firing at targets at various ranges in direct and indirect mode. It should accommodate the azimuth and elevation mechanism with optical system:- (a) Weight – not more than 1 Kg. (b) Weight with case – not more than 3 Kgs. (c) Magnification - Not less than 2.5 X. (d) Field of view - Not less than 13° (e) Filter – Should be provided with neutral and orange filters for bright and poor light conditions respectively. (f) Quick Release Handle - Should be provided with quick release handle for quick deflection of more than 6 degree. (g) Graticule sight should be provided to allow direct viewing and laying up to 700 metres in direct firing mode. (h) Measure of Unit - Should follow "degree/Mil"
<u>PHYSICAL CHARACTERISTICS</u>		
13.		The weapon should be compact, easy to carry, handle and operate and simple to maintain.
14.		The weapon should be compatible to use indigenously developed 30 mm VOG ammunition.
15.	Weight	(a) Launcher with mount - Not more than 20 Kgs. (b) Magazine Box with 30 Grenades - Not more than 15 Kgs. (c) Magazine Box (Empty) -Not more than 3 Kgs.

**REVISED QRS/SPECIFICATIONS OF 30MM AUTOMATIC
GRENADE LAUNCHER (Contd....)**

Ser No	Specification	Parameters
16.	Length	The overall length of the weapon i.e, barrel and receiver group should not exceed 870 mm.
17.	Mountings	In addition to tripod available, mounting should also have the provision for vehicles and helicopter configurations.
<u>OPERATION AND MAINTENANCE</u>		
18.		The proposed weapon should be capable of Functioning satisfactorily under all operational conditions.
19.	Operational temperature	(a) Operating -45 ° to + 50 ° C. (b) Storage -45 ° to + 70 ° C.
20.		The AGL should be easy to maintain. The parts of the AGL should not corrode on exposure to 'rain and salt water'.
21.		The AGL should be easy to repair. Parts likely to be worn out/damaged/broken while in prolonged usage should be capable of being replaced easily under field conditions.
22.	Technical Documents	To be provided with each weapon in English, giving details of the weapon, functioning, operations, maintenance and its handling.


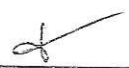







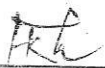
<p><i>[Signature]</i> MAD RMS/Cell 51224 SC (A), Tg Centre</p>	<p><i>[Signature]</i> Ajit Singhania Lt Col</p>	<p><i>[Signature]</i> (Chhokar Arjun) DC CFP</p>	<p><i>[Signature]</i> (Yash Singh) DG JIB</p>
<p><i>[Signature]</i> ANU TUPAL AS IT DC (A)/NSG</p>	<p><i>[Signature]</i> (AARDEY KUMAR) JE (CA) DC (A)/NSG-9</p>	<p><i>[Signature]</i> AC-II R.B. KUMAR SC, NSG</p>	<p><i>[Signature]</i> (Satinder Singh) AC ITBP</p>
<p><i>[Signature]</i> Major Ashish Mohanty TC WE H&NSG</p>	<p><i>[Signature]</i> R. Kumar (HARJINDER KUMAR) DC BSF</p>		

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TRIAL DIRECTIVES FOR 30MM AUTOMATIC GRENADE LAUNCHER

Ser No	Specification	Parameters	Trial Directives
1.	Operating/Loading	The AGL should preferably be belt fed and operate on blow back action and be air cooled	To be physically checked by the Board of Officers and a certificate regarding the principle of operation of the weapon to be provided by the OEM.
2.	Calibre	30 mm	The OEM must provide a certificate - about the calibre of the weapon.
3.	Range	Effective range should not be less than 1700 meters by direct and indirect fire. Aimed fire with open sight should not be less than 800 meters and with telescopic sight 1000 meters. In indirect mode, it should be able to engage targets effectively at all ranges in low as well as high angle.	The OEM must provide a certificate about the effective range of 1700 meters from a national / international accredited lab. However, the range test for direct/indirect fire with open sight and telescopic sight for 800m and 1700m respectively shall be carried out by the Board of Officers physically. Ranges of 800m and 1700m shall be marked by flags and after having zeroed the weapon with open sight and telescopic sight, 10 rounds (for each range) will be fired in an area of 100x40m for every range with fixed 10 full-height figure 11 targets (plywood figures connected crosswise). Range check will be complete if minimum 70% of targets are hit with fragments at 800m and minimum 50% of targets are hit at 1700m.
4.	Accuracy	The accuracy of the weapon should be comparable with that of the available weapons in the same class. The accuracy at max range should be $\bar{\Delta} \leq 1/70$ and $\bar{\Delta} \leq 15m$.	Accuracy test shall be carried out at maximum range of 1700m. 3-5 round bursts will be fired at this range and the accuracy should be within the specified range. (a) $\bar{\Delta} \leq 1/70$ - represents mean deviation of burst points in range/X; [where X= 1700 + Xcp; Xcp = mean arithmetic coordinates of grenade bursts] $\leq 1/70$. (b) $\bar{\Delta} \leq 15m$ - represents mean deviation of burst points in lateral direction $\leq 15m$.

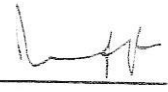

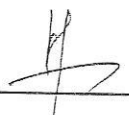

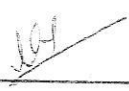
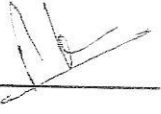

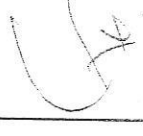
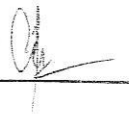

TRIAL DIRECTIVES FOR 30MM AUTOMATIC GRENADE LAUNCHER (Contd...)

Ser No	Specification	Parameters	Trial Directives
5.	Type of Fire	The weapon should fire in automatic mode and it should also fire single shots when fired in controlled burst.	To be physically checked by BOO.
6.	Barrel	Life of Barrel should be minimum 4000 Grenades.	The OEM must provide a certificate from a national / international accredited lab.
7.	Rate of Fire	(a) Rapid - Not less than 70 rounds per minute. (b) Cyclic - 350 - 400 rounds per minute.	(a) To be physically checked by BOO. (b) The OEM to provide a certificate from National/ International Accredited Laboratory.
8.	Magazine box	The ammunition should be belt fed from a magazine box of 30 rounds.	To be physically checked by BOO.
9.	Traverse	The weapon should be able to traverse on its mount to cover at least 30 degree frontal arc. It should have the facility of free and controlled traverse.	To be physically checked by BOO.
10.	Elevation	Free as well as controlled elevation arrangements should be provided in its mounting. It should also have an depression / elevation from -5° to +70°	To be physically checked by BOO.
11.	Design	The weapon should be so designed that it can be stripped without the need of any special tools.	To be physically checked by BOO.

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TRIAL DIRECTIVES FOR 30MM AUTOMATIC GRENADE LAUNCHER (Contd...)

Ser No	Specification	Parameters	Trial Directives
12.	Sighting system	<p>Launcher Sight - To be used for laying the launcher when firing at targets at various ranges in direct and indirect mode. It should accommodate the azimuth and elevation mechanism with optical system:-</p> <ul style="list-style-type: none"> (a) Weight – not more than 1 Kg. (b) Weight with case – not more than 3 Kgs. (c) Magnification - Not less than 2.5 X. (d) Field of view - Not less than 13° (e) Filter – Should be provided with neutral and orange filters for bright and poor light conditions respectively. (f) Quick Release Handle -Should be provided with quick release handle for quick deflection of more than 6 degree. (g) Graticule sight should be provided to allow direct viewing and laying up to 700 meters in direct firing mode. (h) Measure of Unit -Should follow 'Degree/Mil'. 	To be physically checked by BOO. The OEM must provide a certificate from a national/ international accredited lab in respect of magnification.

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TRIAL DIRECTIVES FOR 30MM AUTOMATIC GRENADE LAUNCHER (Contd...)

Ser No	Specification	Parameters	Trial Directives
		<u>PHYSICAL CHARACTERISTICS</u>	
13.		The weapon should be compact, easy to carry, handle and operate and simple to maintain.	To be physically checked by BOO.
14.		The weapon should be compatible to use indigenously developed 30 mm VOG ammunition.	To be physically checked by BOO.
15.	Weight	(a) Launcher with mount - Not more than 20 Kgs. (b) Magazine Box with 30 Grenades - Not more than 15 Kgs. (c) Magazine Box (Empty) -Not more than 3 Kgs.	To be physically checked by BOO.
16.	Length	The overall length of the weapon i.e, barrel and receiver group should not exceed 840 mm.	To be physically checked by BOO.
17.	Mountings	In addition to tripod available, mounting should also have the provision for vehicles and helicopter configurations.	To be physically checked by BOO.
		<u>OPERATION AND MAINTENANCE</u>	
18.	Operational temperature	(a) Operating -45° to $+50^{\circ}$ C. (b) Storage -45° to $+70^{\circ}$ C.	The OEM must provide a certificate from a national/ international accredited lab.

TRIAL DIRECTIVES FOR 30MM AUTOMATIC GRENADE LAUNCHER (Contd...)

Ser No	Specification	Parameters	Trial Directives
19.		The AGL should be easy to maintain. The parts of the AGL should not corrode on exposure to 'rain and salt water'.	To be physically checked by BOO.
20.		The AGL should be easy to repair. Parts likely to be worn out/damaged/broken while in prolonged usage should be capable of being replaced easily under field conditions.	To be physically checked by BOO.
21.	Technical Documents	To be provided with each weapon in English, giving details of the weapon, functioning, operations, maintenance and its handling.	To be physically checked by BOO.

<p><u>[Signature]</u> Maj RAJESH SINGH SC FO, Try Centre</p>	<p><u>[Signature]</u> Anil Singhrola Lt Col</p>	<p><u>[Signature]</u> (Abduram Khan) DC, CRPF</p>	<p><u>[Signature]</u> (YOGESH SINGH) DC, SSB</p>
<p><u>[Signature]</u> Maj P. P. P. ASST DIR DQA/AM-9</p>	<p><u>[Signature]</u> (PRADIP KUMAR) JG (CA) DQA/AM-9</p>	<p><u>[Signature]</u> AC-1 R.B. Kadann SWS, 234</p>	<p><u>[Signature]</u> (Satinder Singh) AC ITBP</p>
<p><u>[Signature]</u> Maj Ashish Mohanji TC WE HQ NSG</p>	<p><u>[Signature]</u> (Harinder Kumar) Bt Bst</p>		

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