

# THE ARMAMENT OF THE "POST-70 SOLDIER"



DE KRUIHOORN N.V., 's-HERTOGENBOSCH, HOLLAND



1. NWM are manufacturers of infantry weapons and all types of ammunition up to, and including, 40 mm, specialising particularly in break-up ammunition for training and trials.
  
2. The firm is currently considering the Post-70 Soldier and his requirements. They believe that the following weapons and ammunition, which are marketed or manufactured by NWM, offer a significant contribution to the manner in which the infantryman of the next decade will be armed:
  - a. Stoner 63A1 Weapons System, caliber 5.56 mm, consisting of an assault rifle XM22 and a belt fed machine gun XM207
  - b. Various types of 5.56 mm ammunition
  - c. A variety of 40 mm rifle projected grenades
  - d. NWM V40 mini-handgrenades
  - e. Hand held flame grenade launcher, caliber 35 mm
  - f. Knife-cutter-bayonet KCB-70.
  
3. Technical details of these items are given in pamphlets and brochures attached to this summary.

#### THE CONCEPT

4. The concept which led to the selection of these items is based upon the principles of:
  - a. Increased fire power for the infantryman
  - b. The highest degree of accuracy in delivering this fire power
  - c. Lightening the combat load of the soldier
  - d. Freeing the soldier, as far as possible, from dependence upon other supporting weapons.
  
5. The infantryman of today is generally armed with weapons which will deliver a 7.62 mm bullet 2,000 meters with sufficient residual energy to kill. Few riflemen, however, have the skill to acquire and hit a target at that range. Hence the recent trend to move towards a lighter caliber as exemplified by the massive switch to 5.56 mm weapons by the United States Forces in Vietnam and elsewhere. The communist "bloc" countries too, whether Soviet or Chinese orientated, all carry the AK47 assault rifle which, firing a 7.62 mm intermediate round, enables the rifleman to produce accurate, automatic fire in short bursts when required. This can also be achieved by the Stoner 63A1 assault rifle XM22 but not by heavier weapons firing the 7.62 mm full powered round.

**THE ADVANTAGES OF 5.56 mm WEAPONS**

6. **Weight.** This is of paramount importance and the following figures speak for themselves.

	Rifle	Rifle plus 500 rounds <u>ammunition</u>	100 rounds <u>ammunition</u>	LMG plus 500 rounds <u>ammunition</u>
Stoner 63A1 (cal. 5.56 mm)	3.50 kg (7.75 lbs)	9.15 kg (20.25 lbs)	1.13 kg (2.5 lbs)	12.47 kg (27.5 lbs)
NATO (L1A1, MAG) (cal. 7.62 mm)	4.22 kg (9.30 lbs)	16.67 kg (36.80 lbs)	2.49 kg (5.5 lbs)	25.17 kg (55.5 lbs)

It can be seen that a rifleman or machine gun team can carry twice as much 5.56 mm ammunition as 7.62 mm ammunition whilst retaining the same combat load.

7. **Range of Engagement.** 5.56 mm weapons have been criticised for lack of range. The number of occasions, however, during World War II, Korea or Vietnam, when a rifleman has been asked to engage a target at more than 400 meters have been very few indeed. So much so that performance over that range is really very unimportant. Even so the Stoner 63A1 weapons firing 5.56 mm ammunition will match all 7.62 mm or .30-06 weapons for accuracy, consistency and lethality out to 700 meters.

8. **Chance of a hit.** It is also true that the average soldier stands a far greater chance of a hit with 5.56 mm weapons than with heavier calibers. This is because they are lighter, handier and produce far less recoil energy into the shoulder.

**AMMUNITION AVAILABLE**

9. The following types of 5.56 mm ammunition are available:
- Ball M193
  - Tracer M196
  - Armour Piercing (designed by NWM)
  - Grenade Launching
  - Blank

The armour piercing 5.56 mm rounds have a tungsten carbide core and will penetrate 20 mm ( $\frac{3}{4}$ " ) of homogenous armour plate at a distance of 100 m. This enables the rifleman equipped with a Stoner 63A1 Rifle to penetrate all known armoured personnel carriers.



**KCB - 70 (KNIFE - CUTTER - BAYONET)**

10. This combined combat knife, wire cutter, saw and bayonet, developed jointly by NWM and Eickhorn of Solingen, will prove a useful adjunct to the Stoner Weapons System.

**RIFLE GRENADES**

11. The range of 40 mm rifle grenades - manufactured by Mécár, the makers of the famous Energa anti-tank grenades - have an average weight of 200 grams (7.04 ozs) as compared to 650 grams (1.43 lbs) for the conventional rifle grenade. They, alone amongst rifle projected grenades, can be fired accurately from the shoulder up to distances of 200 meters. For longer ranges (and the maximum range for the anti-personnel and anti-vehicle rounds is 550 meters) the rifle can be used as a light mortar. The fragmentation grenade produces approximately 500 fragments at about 1,700 m/sec velocity and has 100 percent probability kill radius of 5 meters. The armour piercing grenade penetrates a minimum of 125 mm (5½") of armour plate or, for urban fighting or the anti-bunker role, 375 mm (15") of concrete. At the sacrifice of a little range, (maximum at the moment 310 meters), the entire range of grenades is now available with bullet traps, thus enabling them to be fired with normal ball ammunition. This development, of course, confers great flexibility on the rifleman. Without carrying another weapon or using special ammunition, he can now fire anyone of a wide range of 40 mm grenades with instant response time.

**HANDGRENADES**

12. Complementary to this range is the NWM V40 Mini-Handgrenade, pre-fragmented to produce more than 300 optimum-sized fragments at 1,800 m/sec (6,000 ft/sec) over a 5 meters lethal radius. Weighing only 140 grams (4.9 ozs) and not bigger than a golf ball, this grenade can be thrown, with accuracy, 75 meters against a 50 meters inaccurate lob for standard-sized grenades. Moreover, two or three times as many can be carried for the same weight and volume.

**HAND HELD FLAME GRENADE LAUNCHER**

13. This is a development of the German company Buck and weighs only 520 grams (1.2 lbs). The incendiary charge of 240 grams (8.8 ozs) of red phosphorus can be fired accurately up to 80 meters. The grenade will explode on impact or give an airburst at approximately 80 meters (after 2 seconds delay). The result is an instant toxic smoke screen and particles of burning red phosphorus over an area of about 15 x 5 meters. For the first time the infantryman can put down an instantaneous smoke screen beyond the range of an hand thrown grenade. Coupled with this advantage is the fact that its toxic effect makes it an offensive rather than a merely passive defensive device, thus enabling the infantryman to take vigorous follow-up action instead of concentrating on extricating himself from an adverse situation.

**SUMMARY**

14. The "Post-70 Soldier", taking advantage of the items described in this summary and the attached brochures, might be equipped as follows:

	<u>Weight</u>	
	<u>lbs</u>	<u>kg</u>
<b>a. RIFLEMAN</b>		
1 Stoner 63A1 Assault Rifle - XM22	7.72	3.50
1 Loaded magazine of 30 rounds on the rifle	1.32	0.60
6 Loaded magazines, 180 rounds, in 2 pouches	7.92	3.60
1 Magazine with 10 grenade launching cartridges	0.43	0.20
1 Magazine with 10 armour piercing cartridges	0.45	0.20
1 Bayonet KCB-70	0.90	0.41
4 Hand held flame grenade launchers	4.60	2.09
6 Rifle grenades, armour piercing, fragmentation or illuminating	2.64	1.20
2 Bandoleers, each of 5 NWM V40 Mini-Handgrenades	3.42	1.46
Webbing equipment	2.86	1.30
	<u>32.26</u>	<u>14.56</u>
<b>b. Machine Gunner</b>		
1 Stoner 63A1 LMG - XM207	12.5	5.56
1 Box of 100 rounds on the gun	2.5	1.13
4 Boxes of 100 rounds in 2 pouches	10.0	4.53
2 Bandoleers, each of 5 NWM V40 Mini-Handgrenades	3.42	1.46
Webbing equipment	2.86	1.30
	<u>31.28</u>	<u>13.98</u>
<b>c. Assistant Machine Gunner</b>		
1 Stoner 63A1 Assault Rifle - XM22	7.72	3.50
1 Magazine of 30 rounds on the rifle	1.32	0.60
6 Loaded magazines, 180 rounds, in 2 pouches	7.92	3.60
1 Bayonet KCB-70	0.90	0.41
1 Bandoleer of 5 NWM V40 Mini-Handgrenades	1.71	0.73
3 Rifle grenades, armour piercing, fragmentation	1.32	0.70
4 Boxes of 100 rounds in 2 pouches for LMG	10.0	4.53
1 Spare barrel for LMG	4.25	1.92
Webbing equipment	2.86	1.30
	<u>38.0</u>	<u>17.29</u>



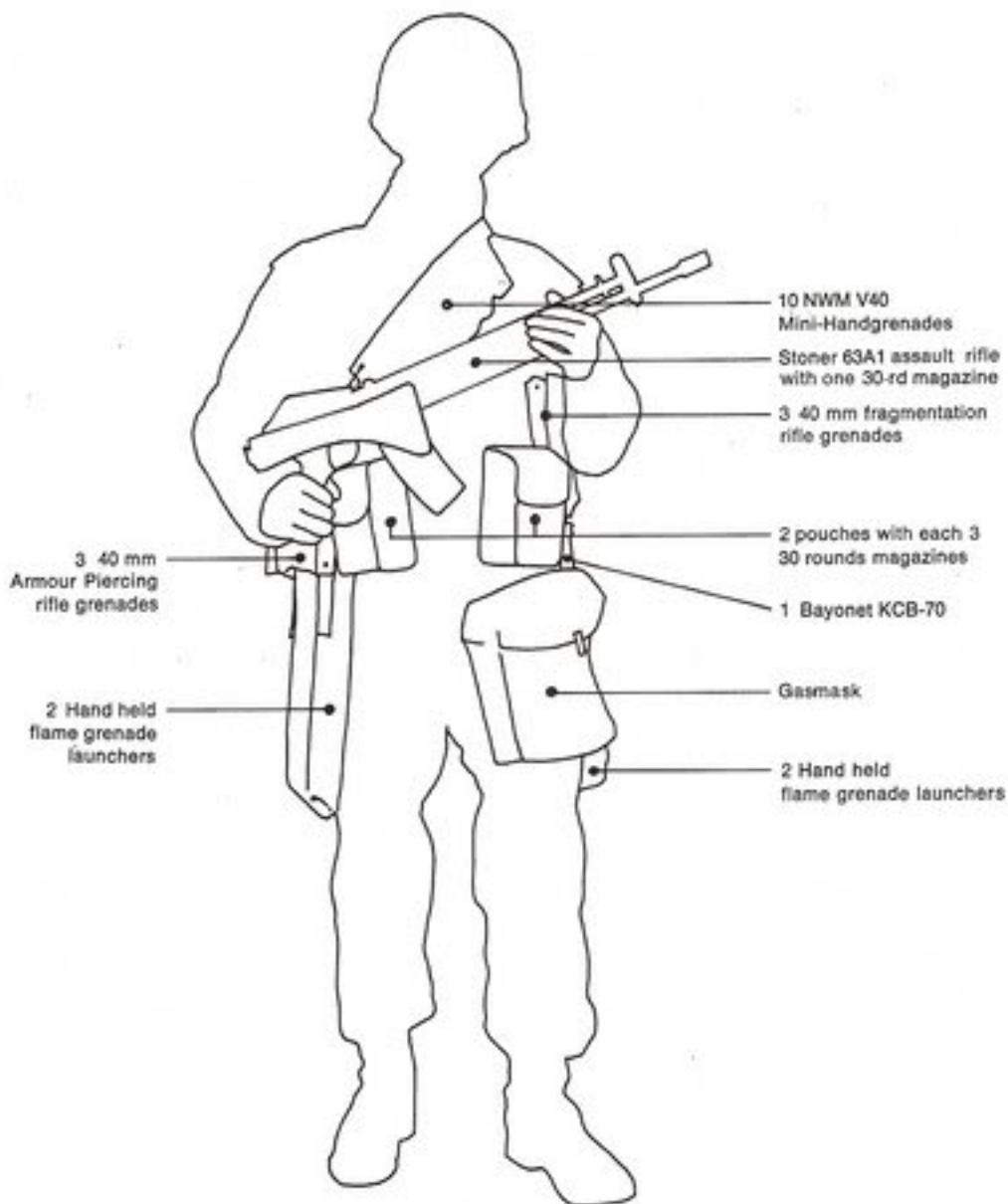
15. Thus equipped, a squad of "Post-70 Soldiers" would be carrying the lightest, most comprehensive and most effective range of infantry armament available. As a squad they would be equipped for any role, extremely hard hitting and freed to an unprecedented degree from dependence upon outside supporting weapons. With every man having an automatic fire and limited anti-armour capability, a squad consisting of riflemen and a 2-men gun team would be a powerful team capable of significant independent action. With the tendency towards fewer infantrymen and greater numbers in the logistics echelons it is essential that even the smallest combat team should be a force to be reckoned with.

16. It is equally essential that the combat load of weapons and ammunition carried by individuals should be kept as light as possible. In this way, and without increasing his overall load, the individual will be able to carry all the surveillance, protective and other devices which modern technology offers to make the "Post-70 Soldier" the most efficient ever.

17. His load may be further lightened in the near futury by aluminum cartridge cases, but NWM are convinced, after extensive research, that flechettes, combustible cases and caseless ammunition for infantry weapons will not be available for another 10 to 20 years.

's-Hertogenbosch, November 1968

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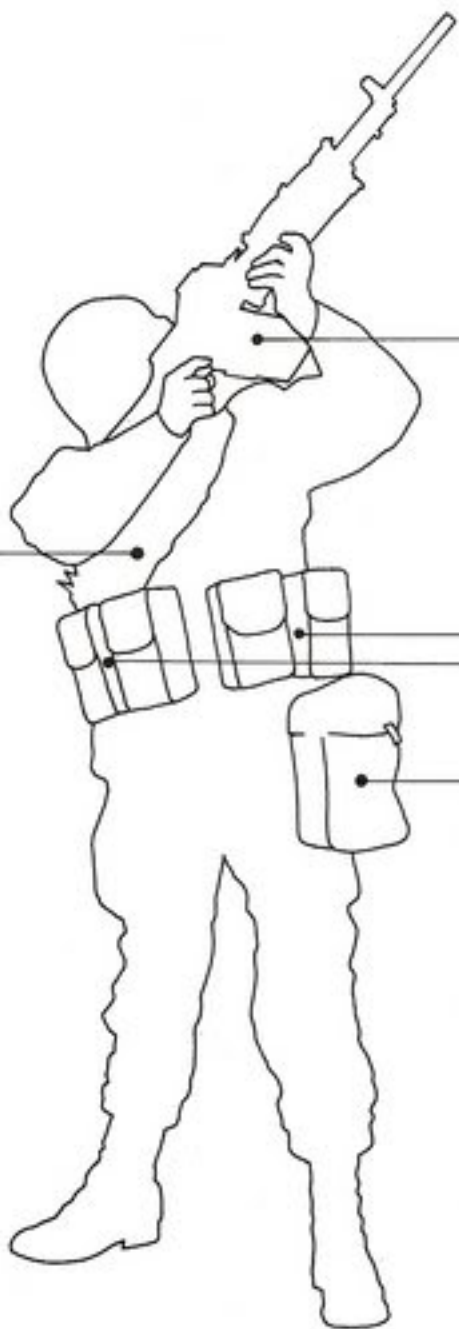




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The Armament of the  
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10 NWM V40  
Mini-Handgrenades

Stoner 63A1  
belt fed machine gun  
with one 100-rd box

2 pouches, each  
containing 2 boxes for  
100 rounds (total 400 rds)

Gasmask



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