

PREFACE

Defence Export Promotion Organization (DEPO), a premier organ of Ministry of Defence Production, is entrusted with the sacrosanct onus of promoting our domestic defence products. DEPO is the marketing end of our robust and reliable defence industry which is uniquely positioned at the interface of civil - military collaboration. Apart from its contribution to the national exchequer, it serves to project Pakistan as self-reliant, innovative and technology conscious country in the defence sector. To achieve these objectives and highlight the potential of Pakistan Defence Industries, a need was felt to consolidate the details into a Catalogue which would provide a wholesome picture of all Defence Manufacturers, both from the Public and Private Sectors, their products, capabilities, facilities and contact details. The 1st, 2nd & 3rd editions were published in 2014, 2017 & 2021 respectively. By the Grace of Almighty Allah, the defence products base of Pakistan has expanded manifolds, hence necessitating revision of 2025 edition.

The 3rd edition of Pakistan Defence Products Catalogue has been made more comprehensive by including new industries in both public and private sectors and would prove more benecial to the customers in identifying the defence products and its OEMs. The catalogue on one hand contains information on high grade weapon systems like jet ghter aircraft (JF-17 Thunder), basic / advance trainers aircraft, MBTs, APCs, surface to air and anti tank missile systems, sophisticated surface and sub surface naval crafts, state of the art secure communication systems, and on the other has also focused on force multipliers like thermal NVGs, UAVs, smart munitions, etc. All these products are backed up by ISO certication, aerospace standards of latest revision and R&D organizations, which are constantly working towards quality assurance and product improvement, thereby guaranteeing customer satisfaction.

Defence Product Catalogue - 2025 is a remarkable effort and a leap towards export promotion, which would not have been possible without the active support and untiring eorts by DEPO and all stake holders.

WELCOME TO *Pakistan*

International Defence Exhibition and Seminar (IDEAS) is one of the mega regional events; biennially organized in Pakistan by Defence Export Promotion Organization (DEPO), Ministry of Defence Production (MoDP). A continuous success story since year 2000, IDEAS has emerged as an iconic event on the canvas of global defence exhibitions. Today, it is regarded as an established rendezvous for convergence of international defence exhibitors, delegates, security analysts and top-level policy planners.

IDEAS is an ultimate platform to showcase the innovation in defence and security technologies of tomorrow; with a variety of weapon systems and equipment on display. A number of conferences and a capstone seminar are its hallmark events for evaluation of defence and security outlook of the future. The event also brings together international manufacturers and suppliers of products and services to explore new avenues of defence cooperation through joint ventures, outsourcing and mutual collaboration. Quantitatively, the event marked several key achievements, including the establishment of the Iran and UK pavilions for the first time. This expansion not only highlighted IDEAS' growing international appeal but also strengthened Pakistan's defense relations with these countries.

IDEAS truly validates a successful public-private partnership model. Its participation and international attendance is indeed manifestation of our deeply embedded and mutually beneficial relations with international community. In addition, the high profile of visiting delegates adds to its prestige and stature. In fact, IDEAS is a shared vision for global peace, stability and prosperity.

IDEAS 2026, 13th eventful edition is scheduled to be held at Karachi from 24 to 27 November 2026.

I look forward to welcoming the distinguished participants.

DG DEPO



VISION

As a national platform, provide support to Defence manufacturing, service sector and the export chain through "Promotion, Facilitation & Coordination" for sustained growth of Defence exports.



MISSION

Facilitate, Coordinate & Promote Export of Defence related quality products.



Strategic Export Control Division (SECDIV)

"Contributing towards non-proliferation and security through effective export management of sensitive goods and technologies"

Proliferation of Weapons of Mass Destruction poses a threat to international peace and security. In pursuance of its commitment to non-proliferation, Pakistan has instituted comprehensive legislative, regulatory and implementation system involving transfer of sensitive goods and technologies and ensuring their safety and security at all stages. Export Control on Goods, Technologies, Material and Equipment related to Nuclear and Biological Weapons and their Delivery Systems Act-2004 (SECA-2004) was passed by the National Assembly on 14 September, 2004. The Act further strengthens controls on export of sensitive technologies particularly related to Nuclear and Biological weapons and their means of delivery, and enable governmental controls over export, re-export, transit, and transshipment of goods, technologies, material and equipment related therewith.

Lists of goods and technologies subject to regulatory controls were notified in 2005(SRO 1078(1)2005) and subsequently reviewed / revised (The latest version notified vide SRO 1142(1)/2016). These lists are consistent with the scope of export controls maintained by Nuclear Supplies Group, Australia Group and Missile Technology Control Regime. These are periodically reviewed/revised by a standing Joint Working Group (JWG).

Pursuance to SECA-2004, the Strategic Export Control Division (SECDIV) was set up in 2007 as part of the Ministry of Foreign Affairs (SRO 499(1)2009), to administer export controls. SECDIV is the licensing authority for items mentioned in the Control Lists and those non listed items which could possibly be used in WMDs or their delivery systems. It also coordinates enforcement of the Act. Export Control (Licensing and Enforcement) Rules (SRO 450(1)2009) were notified in 2009, which set out procedures for licensing and implementation.

An Oversight Board was also set up (SRO 693(1)2007) to monitor the implementation of SECA-2004, including the formation and functioning of SECDIV.

For promoting self regulation and fostering a compliance culture, guidelines have been published vide Gazette of Pakistan notification no. 2(24)/2013-SECDIV(P) in 2014. In addition, "Policy Guidelines on strategic export controls", govern the policies and practices on dual use and sensitive goods and technologies.

LAND

PAKISTAN ORDNANCE FACTORIES (POF)	07
HEAVY INDUSTRIES TAXILA (HIT)	43
NATIONAL RADIO & TELECOMMUNICATION CORPORATION (NRTC)	73
RESEARCH & DEVELOPMENT ESTABLISHMENT (RDE)	139

SEA

KARACHI SHIPYARD & ENGINEERING WORKS LTD (KSEW)	151
PAKISTAN NAVY DOCKYARD	161

AIR

PAKISTAN AERONAUTICAL COMPLEX (PAC)	165
---	-----

SPD

GLOBAL INDUSTRIAL & DEFENCE SOLUTIONS (GIDS)	181
PAKISTAN MACHINE TOOL FACTORY (PMTF)	229
PEOPLES STEEL MILLS LTD (PSML)	235
HEAVY MECHANICAL COMPLEX-3 (HMC-3)	239



Pakistan Ordnance Factories

www.pof.gov.pk





Contents	Page No.
» Small Arms	12
• Military Explosives	
• Assault Cum Sniper Rifle AZB (DMR)	
• Sporter Hunting Rifle .308 Win Sporter	
» Small Arms Ammunition	16
• 9 X 19mm Ball	
• 7.62 x 54mm Ball & Tracer.	
» Aircraft & Anti Aircraft Ammunition	20
• Aircraft Ammunition 30mm	
• Bomb HE GP 500 & 1000 LBS	
» Artillery Ammunition	22
• QF 25 PDR MK 2/1	
• 155 mm HOW HE M 107	
» Tank & Anti-Tank Ammunition	25
• 105mm HE/TK P1A1	
• 105mm APFSDS P1A1	
• 125mm APFSDS/T	
» Rockets	27
• 40mm HEAT P1 Mk1 (RPG-7P)	
• Rocket 122mm HE (MBRL) YARMUK	
» Mortar Bombs	29
• 60mm HE P2A1 & Smoke P2A3	
• Training (Inert) (60, 81, 120mm)	
» Grenades, Pyrotechnics, Demolition, Fuzes & Primers	32
• APHE P2 A1	
• Fuzes & Primers	
» Wah Brass Products	34
• Wah Brass Mills	
• Quality	
• Product Mix	
• International Standards	
» Military Explosives & Propellants	36
• Military Explosives	
• Propellants for Mortar Bombs & Rockets	
» Commercial Explosives	38
• Commercial Explosive & Accessories	
» Clothing & PLCE	39
• Military Uniforms/PLCE Clothing Products	
» Miscellaneous Products	40
• Non-Ferrous Products	
• Tungsten Carbide Products	
• Plastic Packing Materials	
• Sporting Ammunition	

PAKISTAN ORDNANCE FACTORIES (POF)



Message from the **Chairman**

Pakistan Ordnance Factories is the country's premier defence production organization. We warmly welcome our international clients from friendly countries and offer a broad range of defence products manufactured on the highest level of quality standards at most competitive prices. Established in 1951, POF is the largest state-owned defence manufacturer in Pakistan. Besides being the main supplier of Pakistan Armed Forces and the law enforcement agencies, POF exports to a number of countries across the globe.

Having a work force of over 27,000 skilled employees in 14 defence industrial units and a number of commercial subsidiary companies, POF employs more than 20,000 plants scattered in the gigantic industrial complex located at Wah Cantonment in Pakistan. Our product range is exquisitely portrayed in this catalogue. We display it in most of the international defence exhibitions. POF's Exports Division employs experts who take care of customer requirements in a professional manner with utmost promptness. You may send all of your inquiries to us on exports@pof.gov.pk with my personal assurance of excellent assistance from POF.

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PRODUCTION UNITS

POF'S comprises of following factories and subsidiary companies:

Defence Division

- Weapons Factory
- Machine Gun Factory
- Small Arms & Ammunition Factory
- Medium Artillery Ammunition Factory
- Bombs & Grenades Factory
- Heavy Artillery Ammunition Factory
- Tank & Anti-Tank Ammunition Factory
- Tungsten Alloy Factory
- Filling Factory
- Brass Mill
- Propellants Factory
- Explosive Factory
- Tungsten Carbide Factory

Commercial Division

- **Wah Industries Ltd. (WILL)**
 - Shot Gun Ammunition Factory
 - Packaging Factory
- **Wah Nobel (Pvt.) Ltd.**
 - Wah Nobel Acetates Ltd.
 - Wah Nobel Chemicals Ltd.
 - Wah Nobel Detonators Ltd.
 - Gezhouba Wah Nobel
 - Blasting (Pvt.) Ltd.
- **Wah Brass Mills (Pvt.) Ltd.**
- **Hi-Tech Plastic (Pvt.) Ltd.**
- **Wah Clothing (Pvt.) Ltd.**
- **Wah Constructions Ltd.**

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Small Arms

Sub Machine Gun **SMG-PK & PK1**

(Produced in Auto and Semi Auto irreversible versions)



SMG PK is one of the most reliable and compact sub machine gun based on the famous H&K delayed roller delayed blowback system. It can be employed for Close Quarter Battle (CQB) and is popular among military personnel, signal personnel, SSG, officers on special duty, military police and civil law enforcing agencies. SMG-PK presents complete versatility and mobility coupled with the punching power of 9 mm Para ammunition. It is also available in semi automatic irreversible and in following versions.

SMG PK with end cap and standard pistol grip.

SMG PK-1 with retractable butt stock and standard pistol grip.

Technical Data

Caliber	9 x 19 mm Para
Feed Device	15 Rounds Magazine and 30 rounds
Mode of Fire	Single and Automatic
Rate of Fire	900 RPM
Muzzle Velocity	375 m/s
Sights	Rigid Front Sight & Rotary Rear Sight
Length of Weapon Pk	345 mm Length of Pk1 = 545 mm
Length of Barrel	115 mm
Weight of Weapon Pk	2.0 kg
Pk 1	2.57 kg

Packing

10 SMGs in a wooden box having gross weight 48 kgs and size 64 x 61 x 46 cm

Sub Machine Gun **MP5 A2 & MP5P3**

(Produced in Auto and Semi Auto irreversible versions)



The sub machine gun MP5 is roller delayed blow back system. This is a magazine fed automatic weapon. Ideal in use for close combat and para military purposes.

It is also available in Semi Auto irreversible and in following versions.

MP5 A2 with fixed butt stock.

MP5 P3 with retractable butt stock.

Technical Data

Caliber	9 x 19 mm Para
Feed Device	15 and 30 round Magazine
Mode of Fire	Semi automatic and sustained
Rate of Fire	800 RPM
Muzzle velocity (Vo)	400 m/s
Effective Range	100 m
Sights	25m and 100m dioptré – rotary rear sight adjustable for windage and elevation
Rifling	6 grooves with constant right hand twist
Length of MP5A2	680 mm (Fixed butt stock)
Length of MP5P3	490 mm (Butt Retracted) 660 mm (Butt Extended)
Length of Barrel	225 mm
Height of Weapon	210 mm
Weight of Weapon with fixed A2	2.54 kg
but stock and without magazine	MP5 P3 weight 2.88 kg

Packing

10 SMGs in a wooden box having gross weight 67 Kg and size 88 x 56 x 45 cm

Small Arms

Assault Rifle

G3A3 & G3P4

(Produced in Auto and Semi Auto irreversible versions)



Automatic Rifle G3A3, cal 7.62mm x 51 NATO is a Battle rifle combining the accuracy of a sniper rifle with the fire power of a machine gun. Rifle G3A3 has free floating barrel and roller delayed below back system and is fed from a 20 round magazine. It is also available in semi-automatic irreversible and in following versions.

G3A3 with fixed butt stock.

G3P4 with retractable butt stock.

Technical Data

Caliber	7.62 x 51 mm NATO
Magazine	20 round, box magazine
Type of Fire	Semi and fully automatic
Rate of Fire	500-600 RPM
Muzzle velocity	780-800 m/s

Sights

Rear	Rotary rear sight with four adjustments 100M 'V' sight & 200, 300 & 400 m aperture sights, adjustable for windage and elevation
Front	Fixed hooded post front sight

Length of standard weapon

G3A3	1020 mm
G3P4	800 mm (Butt Retracted) 1,020 mm (Butt Extended)
Barrel length	450 mm
Width of Weapon	45 mm
Height of weapon	210 mm

Weight of Weapon without magazine

G3A3	4.4 kg
G3P4	4.7 kg
Barrel grooves	4 grooves, Right hand twist, 305 ± 10 mm lead
Effective Range (Iron Sight)	400 m
" "	600 m (Telescopic Sight)

Packing

10 rifles in a wooden box having gross weight 96 Kg and size 120 x 56 x 60 cm.

Battle Rifle

G3S



G3S is an assault rifle chambered in 7.62 x 51mm round. It is ideal for military and the law enforcement agencies looking for a rifle that is short and light enough to be used in urban war fare and also have the capability to reach out up-to 400 meters with accuracy while maintaining higher lethality compared to an assault rifle.

Technical Data

Caliber	7.62 x 51 mm
Operation	Roller Delayed Blow Back
Rate of Fire	575 ± 75 rds./m
Mode of Fire	Semi and Automatic
Muzzle Velocity	710 m/s Approx.
Barrel Type	4R 1:12, Polygonal
Length of Weapon	790 mm (Approx)
Length of Barrel	300 mm (with polygonal rifling)
Weight of Weapon (without magazine)	4.1 Kg. (Approx)
Magazine Capacity	20 rounds
Effective Range (Iron Sight)	400 Meters (Approx)
Sights Radius	475 mm (Approx)

Packing

5 x G3S in cardboard carton and two cartons (10 x G3S) in a wooden box.

Small Arms

Assault Cum Sniper Rifle **AZB (DMR)**



AZB (DMR) fills the gap between a service rifle and a sniper rifle. It is based on standard G3A3 design and requires moderate skills for training. It is ideal for LEAs for being light weight and highly accurate. AZB (DMR) is capable of effectively engaging multiple targets for range up to 600 meters.

Technical Data

Caliber	7.62 x 51 mm NATO
Operation	Roller Delayed Blow Back
Mode of Fire	Semi-Automatic
Muzzle Velocity	800 ± 30 m/s.
Barrel Type	4R 1:12
Length of Weapon	1100 mm (Approx)
Length Barrel	560 mm (22 inches) (Approx)
Weight of Weapon (without magazine)	5.3 Kg (Approx)
Magazine Capacity	20 rounds
Accuracy	2 MOA (with std. Ball Ammo.) & 1.5 MOA with Match Ammo (175 grains).
Butt Stock	Adjustable Butt Stock
Effective Range (With scope on MILL Std. Picatinny Rail)	600 m with Std. Service Ammo. 800 m with Match grade Ammo only
Sight	Sniper Scope with Mill Std. 1913 Rail

Machine Gun **MG3**



MG3 is fully automatic Machine Gun. It is a "recoil operated weapon" in which the recoil forces are used to feed and load the cartridges and to extract and eject the spent cartridge cases. A blank firing attachment which is screwed into the muzzle instead of recoil booster permits the use of blank cartridges for training and exercise.

Technical Data

Caliber	7.62 x 51 mm NATO
Feed device	Disintegrating and non disintegrating belts (DM-1, DM-6 and M-13 links)
Mode of Fire	Fully Automatic
Operating Principle	Recoil operated
Rate of Fire	Approx 1150 ±150 RPM
Sighting Device	Open sighting, using front and rear sights from 200 to 1200m
Safety range in direction of firing	4000 m
Safety range left & right	1000 m each
No. of rifles/twist	Polygon 4 grooves with right hand twist
Muzzle velocity (Vo)	820 m/s
Muzzle Energy (Eo)	3200 NM
Length of standard weapon	1225 mm
Width of gun	130 mm
Height of gun with 'AA' sight raised	270 mm
Height of gun with 'AA' sight lowered	205 mm
Length of barrel with locking piece	565 mm
Height of muzzle with bipod unfolded	300 mm
Weight of weapon with bipod & sling	11.5 kg
Weight of weapon without bipod & sling	10.5 kg
Weight of barrel	1.7kg
Effective Range	1000 m (on bipod) 2200 m (on tripod)

Packing

Two machine guns in a wooden box/steel Chest having weight 52/65 kgs and size 126 x 36 x 29 cm/ 135 x 33 x 29 cm

Small Arms

Sporting & Personal Protection

POF-4 & POF-5

Semi-Automatic Irreversible



POF 4 & POF-5 are the Pistol Version of MP5 family. These pistols can be used with an arm brace and can be mounted with a stock. These pistols come with universal carrying sling, spare magazines and cleaning kit.

Technical Data

	POF-4	POF-5
Mode of Fire	Semi Auto	Single-Semi Auto
Caliber	9 x 19 mm Para	9 x 19 mm Para
Muzzle Velocity	375 m/sec	400 m/sec & energy 470 ft lbs (650 J)
Feed Device	15 x Rounds Steel Magazine	15 & 30 x Rounds Steel Magazine
Sights	Rigid Front Sight & Rotary Rear	Rigid Front Sight & Rotary Rear
Length of Barrel	115 mm	225 mm
Length of Weapon	345 mm	460 mm
Weight without magazine	2.25 Kg	2.45 kg

Packing

10 Pistols in a wooden box having gross weight 52 kg and size 64 x 61 x 46 cm.

Sporter Hunting Rifle

.308 Win Sporter



The .308 Sporter is a semi auto rifle chambered in 7.62 x 51 mm. It is an ideal rifle for hunting, self defence and civil defence. Rifle has Picatinny rail for installation of optics.

Technical Data

Mode of Fire	Semi Automatic
Caliber	7.62 mm x 51mm (308)
Muzzle velocity	800 ± 30 m/s
Effective Range	600 m
Barrel grooves	4 R, 1:12

Sights

Rear	Rotary rear sight with 4 adjustments 100m 'V' sight and 200, 300 & 400m aperture sights, adjustable for windage and elevation.
Front	Fixed hooded post front sight
Magazine	5 x round, box magazine and 20 rounds
Barrel length	18 inch
Length of weapon	1096 mm
Weight of weapon without magazine	4.5 Kg (Approx)

Anti Aircraft Machine Gun 12.7 mm TYPE W-54



An automatic weapon employing the 12.7 x 108 mm API, APIT and Hard Core ammunition. Effective against low flying aircrafts, ground targets, specially light armoured vehicles etc. The gun is supplied complete with tripod, anti aircraft sighting system and a chromium plated spare barrel. This gun can also be mounted on tanks and APC both in the anti aircraft and ground modes.

Technical Data

Gun complete with tripod	92 Kg
Gun Body	36.8 Kg
Gun mount (Tripod)	53 Kg
Anti aircraft sight	2.2 Kg
Ammunition box	14 Kg (with 70 rounds link belt)

Traverse

Vertical traverse	-26 to 78 deg
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Horizontal Traverse

Air targets	360 deg
Ground Targets	120 deg

Performance Effective Range

In air	1600 m
On ground	1500 m

Armour Penetration

From 800 meters	10 mm
From 500 meters	15 mm
Muzzle velocity	800 m/s
Cyclic rate of fire	
600 round/min	
Cartridge used	API, APIT

Packing

- 2 Gun bodies with 2 AA sights, spare parts and accessories packed in a wooden box having gross weight 131 Kg and size 126 x 43 x 47 cm.
- 1 Gun mount with 10 ammunition boxes each containing link belt for 70 cartridges packed in a wooden box having weight 155 Kg and size 177 x 55 x 65 cm.
- 2 Gun mounts packed in a wooden box having gross weight 164 Kg and size 177 x 55 x 65 cm.

Small Arms Ammunition 9 X 19 mm Ball



Cartridge 9 x 19mm for use in any NATO Standard or equivalent 9 x 19mm caliber pistol & SMGs.

Technical Data

Length of complete round	28.90 ~ 29.69 mm
Weight of complete round	11.92 ~ 12.57 gm
Propellant	Single base P2 PHU
Bullet Jacket	Gilding metal (GM) or Brass
Cartridge Case	Brass 70/30

Performance

Velocity	370 ± 15 m/s at 16m
Mean chamber pressure	≤ 285 Mpa
Maximum range	150 m
Accuracy:	mean figure of merit (MFOM) 76.2mm at 50m

Packing

- 01 50 rounds packing in a carton
20 cartons (1000 rounds) packed in a Tin Liner.
Outer packing wooden box.

Net weight	12 Kg
Gross weight	15 Kg
Size of box	32.0 x 28.0 x 12.7 cm.

The packages are supplied with the standard marking.

- 02 50 rounds placed in plastic tray further packed in printed carton 30 printed carton packed in plastic box.

Small Arms Ammunition

Small Arms Ammunition

7.62 x 39 mm Ball & Blank



Cartridge 7.62 x 39 mm is used in any standard 7.62 x 39 mm caliber weapon, in single shot or burst in diverse field conditions. Cartridge 7.62 x 39 mm Blank is produced for use in any standard 7.62 x 39 mm caliber weapon. It can be used in single shot or burst under diverse field conditions.

Technical Data

	7.62 x 39mm Ball	7.62 x 39mm Blank
Length of complete round	55 ~ 56mm	48.20 – 0.62mm
Weight of complete rounds	16.5 ~ 17.5gm (Case Brass/ Steel Care Bullet) 15.9 ~ 16.9gm (Case Brass/ Steel Care Bullet) 16.65 ~ 17.55gm (Case Brass/ GM Bullet)	H-9.20 grams, L-8.80 grams
Propellant	Single base pyroxylye powder (PAX)	Single base smokeless P3 (PBA)
Bullet Jacket	Gilding metal (GM)/Gilding Metal Clad Steel(GMCS)	—
Cartridge Case (GMCS) / Brass	Gilding Metal Clad Steel Brass	

Performance

Muzzle Velocity (at 2 m)	732 ~ 747 m/s
Mean chamber pressure	≤ 2800 Kg / cm ²
Maximum range	1000 m
Accuracy:	Mean Radii 82.55 mm at 200 Yards

Packing

20 rounds are packed in a carton and 84 cartons (1680 rounds) are packed in steel box having gross weight 37.5 kg (for Ball), 23 kg (for Blank) and size 42.3 x 16.4 x 29.1 cm.

Small Arms Ammunition

7.62 x 51 mm Ball, Tracer & Blank



This ammo is available in two variants:

1. 7.62 x 51 mm Ball
2. 7.62 x 51 mm Tracer
3. 7.62 x 51 mm Blank (STAR)

Cartridge 7.62 x 51 mm is used in any NATO Standard 7.62 mm caliber weapons, in single shot or burst in diverse field conditions

Performance

	Regular 7.62mm Ball	7.62mm Tracer
Velocity (at 27.43 m)	811 m/s	794 m/s
Mean chamber Pressure	20.3 Tsi (Base)	20.3 Tsi (Base)
Maximum range	1000 m	1000 m
Accuracy:	Mean Figure of Merit (MFOM) 203 mm at 457m	Mean Figure of Merit (MFOM) 305mm at 457m

Technical Data

	7.62mm Ball	7.62mm Tracer	7.62mm Blank
Length of complete round	70.36~71.12mm	70.36~71.12mm	67.7 ~ 68.7mm
Weight of complete round	23.976 gm	23.392 gm	13.61 gm
Propellant	Single base propellant NC-1055 (PCB)	Single base propellant NC-1055 (PCC)	Single base P3 (PBA) NC-1055
Bullet Jacket	Gilding metal (GM)	Gilding metal clad steel (GMCS)	—
Cartridge Case	Brass 70/30	Brass 70/30	Brass 70/30

Packing

7.62mm Ball

For Rifle G-3

1000 rounds packed in steel box having gross weight 32 kg and size 42.3x16.4x29.1 cm (7.62mm Belted 250 rounds linked in a belt DM-1 & M-13)

For MG-3 1000 rounds packed in a wooden crate having gross weight 36 ~ 41 Kg and size 43.5 x 38 x 31.5 cm 7.62mm Blank

1000 rounds packed in steel box having gross weight 21 Kg and size 42.3x16.4x29.1 cm

Small Arms Ammunition

7.62 x 51 mm Ball, Modified



Cartridge 7.62 x 51mm for use in any NATO Standard or equivalent 7.62 x 51mm caliber weapons, new or old, in single shot or burst in diverse field conditions.

Technical Data

Muzzle Velocity (at 2 m)	811 m/s
Mean chamber pressure	20.3 TSI (Base)
Maximum range	1000 m
Accuracy:	Mean figure of merit (MFOM) 127mm at 457m

Performance

Length of complete round	70.36 ~ 71.12 mm
Weight of complete round	380 ± 10 grain (24.62 ± 0.648 gm)
Propellant	Single base propellant NC-1055 (PCC)
Bullet Jacket	Gilding metal (GM)
Cartridge Case	Brass 70/30

Packing

7.62mm Ball For Rifle G-3	20 rounds packing in carton 50 cartons (1000 rounds) packed in steel box
Gross weight	32 Kg
Size of box	42.3 x 16.4 x 29.1 cm 7.62mm Belted 250 rounds linked in a belt DM-1, M-13
For MG-3	One belt packed in Plastic box. 4 boxes (1000 rounds) packed in a wooden crate/box.
Gross weight (wooden crate)	36 ~ 41 Kg
Size of wooden crate/Plastic box	43.5 x 38 x 31.5 cm.

Small Arms Ammunition

7.62 x 54 mm Ball & Tracer



This ammo is available in two variants:

1. 7.62 x 54 mm Ball
2. 7.62 x 54 mm Tracer

Cartridge 7.62 x 54 mm for use in any 7.62 x 54 mm calibre weapon, in single shot or burst in diverse field conditions

Technical Data

	7.62 mm Ball	7.62 mm Tracer
Length of complete round	75.93~76.70 mm	75.93~76.70 mm
Weight of complete round	27 gm (Approx)	26.35gm (Approx)
Propellant	Single base propellant NC-1055 (PCB)	Single base propellant NC-1055 (PCC)
Bullet Jacket	Gilding metal (GM)/ Gilding Metal Clad Steel (GMCS)	Gilding Metal Clad Steel (GMCS)
Cartridge Case	Brass 70/30	Brass 70/30

Performance

	7.62 mm Ball	7.62 mm Tracer
Velocity (at 27.43 meters)	823 m/s	808 m/s
Mean Chamber Pressure	20.3 Tsi (Base)	20.3 Tsi (Base)
Maximum range	1200 m	1200 m
Accuracy:	Mean Figure of Merit (MFOM) 254mm at 457 m	Mean Figure of Merit (MFOM) 381mm at 457 m

Packing

250 rounds linked in one belt. One belt packed in a Tin Liner. 2 Tin liners (500 rounds) packed in wooden box having gross weight 22 kg and size 42.5 x 26.0 x 23.5 cm

Small Arms Ammunition

Super Match Ammo

.308 WIN Ball (175 grains)



Cartridge .308 WIN Ball (175 grains) – Super Match for use in any NATO Standard .308 caliber weapons, new or old, in single shot in diverse field conditions.

Technical Data

	.308 WIN BALL (175 grains)
Length of complete round	70.36 ~ 71.12 mm
Weight of complete round	26.31 gm ± 0.324 approx
Propellant	Single base propellant NC-1055 (PCS)
Bullet Jacket	Gilding metal (GM)
Cartridge Case	Brass 70/30

Performance

	.308 WIN BALL (175 grains) – SUPER MATCH AMMO
Muzzle Velocity	777 m/s at 2 Meters
Mean chamber pressure	415 Mpa
Maximum range	800 m
Accuracy:	Mean Figure of Merit (MFOM) 10mm at 100m

Packing

SUPER MATCH AMMO
Mode of Packing:

.308 WIN BALL (175 grains)
20 rounds packing in a plastic box/7P Carton
The packages are supplied with the standard marking.

.308 WIN Ball (150 grains) - Sporter Ammo



Cartridge .308 WIN Ball (Sporter Ammo) for use in any 7.62 x 51 mm caliber Sniper Rifle, in single shot in diverse field conditions.

Technical Data

	.308 WIN Ball (150 grains) – AOIERWE AMMO
Length of complete round	70.36 ~ 71.12 mm
Weight of complete round	24 gm approx
Propellant	Single base propellant NC-1055 (PCB/PCH)
Bullet Jacket	Gilding metal (GM)
Weight	150 ± 1.54 grain (9.72 ± 0.1 grain)
Cartridge Case	Brass 70/30

Performance

	.308 WIN Ball (150 grains)
Velocity	811 ± 9.14 m/s at 24m
Mean chamber pressure	≤ 415 Mpa
Maximum range	1000 m
Accuracy:	Mean figure of merit (MFOM) 127mm at 457m

Packing

.308 WIN Ball (150 grains)
(Sporter Ammo)

20 rounds packing in a printed carton /7P Carton

Aircraft & Anti Aircraft Ammunition

Aircraft & Anti-Aircraft Ammunition 12.7 x 108 mm



This ammunition is used for guns Type 54. It is available in two variants:

1. API (Armour Piercing Incendiary)
2. API/T (Armour Piercing Incendiary, Tracer)

It can damage or destroy an aircraft within a range of 1500 meters and light armoured vehicles or vessels within 500 meters.

Technical Data

Weight

API	116-126 gm
API/T	112-122 gm
Length of complete round	147 mm
Propellant	Single base smokeless powder

Performance

Bullet velocity	818-833 m/s
Effective range:	
Air targets	1500 m
Ground targets	500 m

Chamber Pressure:

Mean	3000 kg/cm ²
Max	3300 kg/cm ²

Penetration:

API	20 mm steel plate placed at 100m (Minimum 90% bullets penetrate through the plate)
API/T	15 mm steel plate placed at 100m (Minimum 90% bullets penetrate through the plate) (R.H.A.) Plate (Rolled Homogeneous Armor)

Packing (Without Links)

280 rounds packed in a steel / plastic box having gross weight 42 Kg and size 40 x 16.5 x 30 cm

Aircraft & Anti-Aircraft Ammunition Aircraft Ammunition 30 mm



This ammunition is suitable for use with 30 mm gun. HP aircraft gun M1 fitted on F- 6 (MIG-19) aircraft and is available in the following three variants:

1. Ball (Training)
2. HEI (High Explosive Incendiary)
3. API (Armour Piercing Incendiary)

Performance

The ammunition is fed into gun in link belts.

Muzzle Velocity	800 m/s
Pressure	3050 Kg/cm ²
Range	2000 m

Accuracy:

PE Vertical	1.05 m
PE Horizontal	1.05 m

Technical Data

Weight of complete round	Weight of complete round	
Length of complete round	264-267 mm	
Projectile	Steel	
Identification:	Ball	White Band
HEI	Red Band	
API	No Band	
Fuze	Ball	PRF
HEI	No. 6, Py-5, 6M	
API	No. 8	
Weight	401- 416 gm	
Cartridge Case	Brass 70/30	
Propelling Charge	Single base propellant NCHN 5/7	
Weight of charge	96 gm	
Primer	Percussion type 330	

Packing

BALL : 12 rounds Ball packed in steel box measuring 29.8 x 15.2 x 18.4 cm three steel boxes (36 rounds) packed in a wooden crate:

Size of wooden crate 55 x 37.5 x 26 cm
 Weight of wooden crate 48 Kg
 HEI/API: 27 rounds HEI/API packed in tin liner which is packed in a wooden box:

Size of box 44 x 35 x 20.5 cm
 Gross weight of box 31.30 Kg
 Colour & marking Service brown with yellow / white stencilling

Aircraft & Anti Aircraft Ammunition

Aircraft & Anti-Aircraft Ammunition

Anti Aircraft Ammunition 37mm HE/T



This ammunition is suitable for use with 30 mm gun. HP aircraft gun M1 fitted on F- 6 (MIG-19) aircraft and is available in the following three variants:

1. Ball (Training)
2. HEI (High Explosive Incendiary)
3. API (Armour Piercing Incendiary)

Performance

The ammunition is fed into gun in link belts.

Muzzle Velocity	800 m/s
Pressure	3050 Kg/cm ²
Range	2000 m

Accuracy:

PE Vertical	1.05 m
PE Horizontal	1.05 m

Technical Data

Weight of complete round	1.417 kg (approx)
Length of complete round	381-385 mm (Approx)
Projectile	Forged steel
Main Charge	RDX/Aluminum
Tracer	No. 405 time ≥ 6 sec
Fuze	HE-I with SD mode (9-12 sec delay)
Weight of projectile	732 gm (Aprox.)
Cartridge Case	Brass 70/30
Propelling Charge	Single base propellant HN7/14
Primer	Percussion type No. 12 Mk4 / LA (Modified)

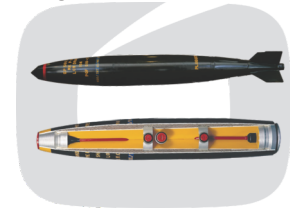
Packing

Each round packed in waterproof re-useable plastic container. 20 rounds packed in a wooden box C-13/P
 Size of box 46 x 36 x 30 cm
 Weight of box 43 Kg
 Colour & marking Service brown with yellow/white stencilling

Aircraft Ammunition

Bomb HE GP 500 & 1000 LBS

(250 Kg) PK-82 & (500 Kg) PK-83 (Low Drag)



This is a multi-purpose bomb similar to US type PK82, having low aerodynamic resistance and is designed to be carried on supersonic aircraft. It is made from forged carbon steel according to BS-3602. For high altitude missions, it is fitted with conventional fin assembly (Conical Fin Assembly MAU-938) and fuzes M-904 & 905. For low level missions, it is fitted with retarder fin assembly (PK-15 MOD-4) with nose fuze M-904. It can be used on all American bomb racks, French bomb racks (PM-3, PRK-12 & PRK-16) or Mirage aircraft having bomb hooks 14" apart. Can also be used with British aircraft bomb release slips having hooks with 14" spacing.

This is a multi-purpose bomb similar to US type PK 83, having low aerodynamic resistance making them suitable for external carriage on supersonic aircraft. Steel casings are manufactured from high quality seamless tubes employing latest forging technology. The bombs are compatible with NATO standard adapters booster, tail and nose fuze. For high altitude missions, it is fitted with Conical Fin Assembly. For low level missions, it is fitted with retarder fin assembly. It can be used on all American bomb racks, French bomb racks (PM-3, PRK-12 & PRK-16) or Mirage aircraft having bomb hooks 14" apart.

Technical Data (PK-82)

Length of bomb with:

I. Retarder fin assembly	2280 mm
II. Conventional fin assembly	2210 mm
Bomb body diameter	275 mm

Weight of bomb with:

I. Retarder fin assembly	254.54 Kg
II. Conventional fin assembly	241.36 Kg
Explosive charge, RDX/TNT	90 Kg (Approx)

Packing (Without Links)

6 bombs packed in steel fixture having gross weight 1600 Kg and size 1680 x 98 x 78 cm

Technical Data (PK-83)

Length of Bomb Body without tail end	1841.50 ± 10 mm
Net Explosive Quantity	185 ± 10 Kgs
Filled Mass of the Bomb	410 ± 30 Kgs
Centre of Gravity of Filled Bomb	1040 ± 20 mm
Density	Not less than 1.64 gm/cm ³

Packing (Without Links)

3 bombs packed in steel fixture having gross weight 1340 Kg and size 1960 x 1150 x 525 cm.

Artillery Ammunition

Artillery Ammunition QF 25 PDR MK 2/1

This ammunition is fired with 25 PDR field guns MK-II and produced in the following two types:

- a. HE b. Blank



Performance

Muzzle velocity (at charge 3)	457 m/s
Muzzle velocity (at super charge)	541 m/s
Average Chamber Pressure	3570 ± 80 kg/m ²
Maximum Range (at charge 3)	10,000 m
Maximum Range (at super charge)	12,000 m
Accuracy :	
PE (Range)	41 m
PE (Lateral)	7.8 m
Sound Level (Blank)	110~130 db
Average Chamber Pressure	3570 ± 80 kg/m ²

Technical Data

Cartridge case is made of drawn brass 70/30 and is filled as below:

- a. HE: (TNT)

Primer	No. 11 MK 4/3
Normal Charge	Triple base flash less propellant NQ 018 & NQ 050, weight 867 gm (Approx)
Super Charge	Triple base flash less propellant NQ/S 134-040, weight 1253 gm (Approx)

- b. Blank:

Primer	No. 1 MK 2
Charge	Gun powder G 12, weight 454 gm

Shell filling:

HE	TNT
----	-----

Fuze PDM - 557 M

Weight/length (approx):	HE	Blank
Complete round weight (kg)	14	2.550
Cartridge case length (mm)	293	293
Projectile weight (kg)	11.4	-
Projectile length (mm)	435	-

Packing (HE)

Inner: Cartridges & shells sealed individually in plastic/chipboard containers

Outer: 8 cartridge cases packed in a wooden box having gross weight 38 Kg and size 60 x 32 x 38 cm 4 shells packed in a steel box having gross weight 36 Kg and size 48 x 21 x 20 cm

Packing (Blank)

01 x ctge packed in plastic container and such 8 x ctgs cases packed in a wooden box having gross weight 36 Kg and size 60 x 32 x 38 cm

Artillery Ammunition 105 mm HOW



This is a semi-fixed ammunition for various type of 105 mm Guns, namely: M1, M2A1, M2A2, M101/101A1, M102 & M106 & many others.

It is produced in following three versions:

- HE P4 MK-1: Fired with normal bursting charge
- Smoke P2 MK-1: Produces white smoke
- Blank P1A3: Fired for ceremonial purposes and acclimatization

Performance: (HE & SMK)

Muzzle Velocity at full charge	494 m/sec
Average Chamber pressure	2500 kg / cm ²
Maximum range	11500 m
Accuracy (HE):	
PE (Longitudinal)	34.5 m
PE (Lateral)	9 m
Sound Level (Blank)	110-125 db

Technical Data

Weight of complete round

HE	19.07 Kg
Smoke	19.77 Kg
Blank	3.75 Kg

Weight of Projectile

HE	15.2 Kg
Smoke	16.0 Kg
Shell Body	Forged steel
Fuze (HE & Smoke)	PD M557
Cartridge case	Drawn Brass 70/30

Propelling charge

HE & Smoke	Single base flash less & smokeless M1
Blank	WM 017 double base Propellant
Primer	P1 Mk3

Packing (Without Links)

Shells and cartridges packed in chipboard container, two containers in a wooden / steel box having gross weight 55 Kg and size 94.5 x 31.5 x 19.5 cm

Artillery Ammunition

Artillery Ammunition

122 mm HOW HE (Type-54)



This is a semi-fixed ammunition for 122 mm Howitzer, type 1954

Performance (at full service charge)

Muzzle Velocity at full charge	515 m/sec
Average Chamber pressure	2350 kg/cm ²
Maximum range	11800 m
Chamber pressure for performance proof tests:	
Strength	2580 ± 40 kg/cm ²
Charge stability	2580 ± 40 kg/cm ²
Detonation	2350 kg/cm ²

Accuracy:

PE (R) / mean (R)	≤ 1/150
PE (Lateral)	≤ 15 m

Technical Data

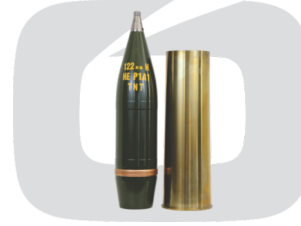
Weight of complete round	27.36 Kg (Approx)
Weight of projectile	21.76 Kg
Shell body	Forged steel
Main charge	3.528 Kg TNT
Fuze	LIU-4 PD Type
Cartridge case	Drawn Brass 70/30
Propelling charge	This consist of nine charge system of single base propellant
Weight of propellant charge	2.10 Kg
Primer	P-304 A1 Percussion type or D-9

Packing

Each round packed in steel box, Fuze is packed separately in plastic container. Charge packed in a brass cartridge case and then packed in a chipboard container. The gross weight of box is 42 Kg and size 109.5 x 16.5 x 21 cm

Artillery Ammunition

122 mm HOW HE D-30 (RRC)



This is semi-fixed ammunition for 122 mm Howitzer, D-30

Performance (at full service charge)

Muzzle Velocity	690 m/s
Average Chamber pressure	2500 Kg/cm ²
Maximum range	15300 m
Chamber pressure for performance proof tests:	
Strength	2760 ± 40 Kg/cm ²
Charge stability	2760 ± 40 Kg/cm ²
Detonation	2500 Kg/cm

Accuracy:

PE (R) / mean (R)	≤ 1/425
PE (Lateral)	≤ 12 m

Technical Data

Weight of complete round	28.5 Kg (approx)
Weight of projectile	21.76 Kg
Shell body	Forged steel
Main charge	3.528 Kg TNT
Fuze	LIU-4, PD type
Cartridge case	Drawn Brass 70/30
Propelling charge(RRC)	This consists of five charge system of single base propellant
Weight of propellant	
Reducable Reduce Charge	2.5 Kg
Full Service Charge	3.5 Kg
Primer	D-5

Packing

Each round packed in steel box, Fuze is packed separately in plastic container. Charged packed in a brass cartridge case and then packed in a chipboard container. The gross weight of box is 44 Kg and size 109.5 x 16.5 x 21 cm

Artillery Ammunition

Artillery Ammunition 130 mm "G" HE



This is a long range separate loading variable charge ammunition to be fired through Soviet M46 and Chinese type 59 and 59-1 guns.

Performance (at full service charge)

Muzzle Velocity	930 m/sec
Average Chamber pressure	3150 kg/cm ²
Max. range at full charge	27490 meters
Chamber pressure for performance proof tests:	
Strength	3560 + 50 kg/cm ²
Charge stability	3560 + 50 kg/cm ²
Detonation	3150 kg/cm ²

Accuracy:

PE (R) / mean (R)	≤ 1 / 220
PE (Lateral)	≤ 18 m

Technical Data

Weight of complete round	60.0 Kg (Approx)
Weight of filled projectile	33.4 Kg
Projectile	Forged steel shell
Main charge	3.44 Kg TNT (Approx)
Fuze	LIU-5 PD type or Proximity PF-1A
Cartridge case	Drawn Brass 70/30
Propelling charge	This ammunition is fired using either a full or reduced charge. The full variable charge as two charge zones, while the reduced variable charge has three zones

Charge weight:

i. Reducible Reduce charge (RRC)	6.7 Kg (Approx)
ii. Reducible Full charge (RFC)	12.90 Kg (Approx)
Primer	D -5 Percussion type

Packing

Each round packed in steel box, Fuze is packed separately in plastic container. Charge packed in a brass cartridge case and then packed in a chipboard container. The gross weight of box is 81 kg (RRC), 88.5 kg (RFC) and size 93 x 41.6 x 21.5 cm.

Artillery Ammunition 155 mm HOW HE M 107



This is separate loading ammunition which is fired from Howitzer M1, M1A1, M114, M-198 & M-109 A2

Technical Data

Weight of projectile	43.2 kg (as fired)
Weight of filling	6.62 kg TNT
Fuze	PDM557 or Proximity PF-1A
Propelling charge	Single base propellant M1SP, MIMP & M6
Green bag (Charge - 5)	M3A1 (Range ~ 9700 m) (Approx)
White Bag (Charge - 7)	M4A2 (Range ~ 14600 m)
Charge 8W (Charge - 8)	M119A2 (Range ~ 18100 m)
Primer	M-82 Percussion type

Performance (With charge M119A2 - white bag with Gun M198)

Muzzle Velocity	684.3 m/sec
Average Pressure	2350 kg/cm ² (Max Pressure 2630 ± 50 Kg/cm ²)
Max Range	18100 m
Chamber pressure for performance proof tests:	
Strength	2630 ± 50 kg/cm ²
Charge stability	2630 ± 50 kg/cm ²
Detonation	2350 kg/cm ²
Accuracy:	
PE (Range)	46 m
PE (Lateral)	15 m

Packing

8 shells packed in a wooden pallet. Propellant charges & Fuzes are packed in steel container.

Tank & Anti-Tank Ammunition

Tank Ammunition 105 mm HE/TK P1A1



This is a general purpose high explosive round. It can be fired from 105mm L7 series rifled tank gun fitted on many current MBTs such as Leopard, Vickers, MK 1&3, M60 (Manufactured under license in USA as M68), early M1, updated M 48, Merkava and re-gunned T-54 series and T-69.

Performance

Muzzle velocity	683 ±15 m/s
Max Range	10400 m

Technical Data

Length of Complete Round	1020 mm (Approx)
Weight of Complete Round	24.21 Kg (Approx)
Shell Body	Forged Steel 12 Kg (Approx)
Fuze	PDM 557 percussion type
Length of Projectile	490 mm
Weight of Projectile	14.28 - 15.27 Kg (with fuze)
Weight of Filling	TNT 2.04 Kg (Approx)
Cartridge Case	Drawn Brass 70 / 30
Propelling Charge	M1-MP
Weight of Propellant	3 Kg (Approx)
Primer	Electric type L20-A1

Packing

Each round is placed in a chip board container then further packed in a steel box having gross weight 47 Kg and size 118x21 x 19 cm

Tank & Anti Tank Ammunition 105 mm APFSDS P1A1



This is a Kinetic Energy Fin Stabilized Round and can be fired from 105mm L7 series rifled tank gun fitted on many current MBTs such as Leopard, Vickers, MK 1 & 2, M60 (Manufactured under license in USA as M68), early M1, updated M 48, Merkava and re-gunned T-54 and T-69 series.

Performance

Muzzle velocity	1490 m/s (Approx)
Effective Range	3500 meter
Penetration	300 mm, against RHA target at zero obliquity, confirming to DEF-STAN 95/13-2

Technical Data

Length of Complete Round	946 mm
Weight of Complete Round	18.91 Kg (Nominal)
Projectile	Tungsten Alloy core with discarding sabot and fin stabilization
Length of Projectile	486 mm
Weight of Projectile	6.12 Kg
Cartridge Case	Drawn Brass 70/30
Propelling Charge	Triple base multi tubular NQ/M .046
Weight of Propellant	5.62 Kg (Nominal)
Primer	Electric Type L20 A1

Packing

Each round placed in a chip board container then further packed in a steel box having gross weight 38 Kg and size 105 x 20 x 19 cm

Tank & Anti-Tank Ammunition

Tank Ammunition 125 mm HE FS TK



This is a general fin stabilized round with High Explosive and can be fired from 125 mm smooth bore tank guns, T-80 UD (Ukraine), AlKhalid (Pakistan), PT-01 (Poland), T-85 (China) or equivalent.

Performance (at full charge)

Muzzle velocity	850 m/s
Chamber pressure	3500 kg/cm ² (Approx)
Max Range	10000 m
Accuracy at 1000 meters:	
SD (Vertical)	0.3 m
SD (Horizontal)	0.3 m

Technical Data

Length of Complete Round	1080 mm
Weight of Complete Round	32.87 ± 0.7 Kg (Approx)
Shell Body	Forged Steel
Fuze	DRH-05, PD type
Length of Projectile	700 mm
Weight of Projectile	23 Kg
Weight of Filling	TNT 3.051 Kg
Case	Semi combustible cartridge case with steel base and cover
Propelling Charge	Consist of single base propellant in tubular bundle and granular form, 14/19, (16/1.35 Tubular)
Primer	Electric Percussion No. DJD-2 or P2

Packing

Charge structure is packed in fibre glass sealed humidity proof container and projectile is packed in steel box. Fuze is packed separately and is placed at one end of the same steel box. The gross weight of box is 59 Kg and size 67 x 44 x 25.5 cm

Tank & Anti Tank Ammunition 125 mm APFSDS/T



This is a Kinetic Energy Fin Stabilized Round and can be fired from 125mm smooth bore tank guns, T-80 UD (Ukraine). Al Khalid (Pakistan), PT-91 (Poland), T-84 (China) or equivalent.

Performance

Muzzle velocity	1730 ± 5 m/s
Effective Range	2000 m
Penetration	460 mm, against RHA target at zero obliquity, confirming DEF-STAN 95/13-2

Technical Data

Length of Complete Round	1086 mm (Approx)
Weight of Complete Round	21.47 Kg (Approx)
Projectile	Tungsten Alloy core with discarding sabot and fin stabilization
Length of Projectile	555 mm (Approx)
Weight of Projectile	7.37 Kg (Approx)

Main Cartridge Case:

Case	Semi combustible cartridge case with steel / brass base and cover
Propelling Charge	16/19 Single base granular
Weight of Propellant	6 Kg
Primer	Electric/Percussion Primer No. 2

Secondary Cartridge Case:

Case	Semi combustible with projectile
Propellant Charge	Granular 16/19 2.50 Kg and Tubular 19/1-25 0.8 Kg

Packing

Main Charge Structure and Secondary Charge Structure are packed separately in fiber glass sealed humidity proof container then are packed in a steel box. The gross weight of box is 53 Kg and size 82 x 50 x 26 cm

Rockets

Anti Tank Rocket

40 mm HEAT P1 Mk1 (RPG-7P)



This is an anti armour grenade used against tanks, self propelled guns and fortifications. It is fired from 40mm Recoilless Launcher, type 1969-1 or equivalent by loading through the muzzle end.

Performance

Maximum range	500 m
Effective range	300 m
Maximum velocity	300 m/s

Accuracy at 300 meters:

SD (Horizontal)	0.75 mm
SD (Vertical)	0.75 mm
Penetration	300 mm thick Armour plate

Technical Data

Caliber	40 mm
Type of Warhead	HEAT
Length of rocket	925 mm
Weight of rocket	2.2 Kg

Packing

Each rocket placed in a polythene sleeve/plastic container and 6 rockets are packed in a wooden box. The gross weight of box is 35 Kg and size 81 x 25.4 x 46.7 cm

Anti Tank Rocket

73 mm HE SPG-9



73 mm FSRA HEAT round is a Fin Stabilized Rocket Assisted High Explosive Anti Tank ammunition fired from its smooth bore Recoilless Launcher 73mm.

Performance

Maximum range	4500 m
Effective range	800 m
Muzzle Velocity	415 ± 20 m/s
Rate of Fire	6 rounds per minute

Technical Data

Length of rocket	1060 mm (Approx)
Weight of rocket	4.5 Kg (Approx)
Weight of shell filled	3.2 Kg (without fuze) 3.295 Kg (with fuze)
Weight of bursting charge	0.765 + 0.055 Kg

Packing

Each warhead assembled with rocket motor placed in a polythene sleeve, while the expelling charge is separately placed in a nylon cylinder. 6 complete sets packed in a wooden box. The gross weight of box is 61.9 Kg (Approx) and size 102 x 50 x 32 cm

Rockets

Anti Tank Rocket

73 mm FSRA HEAT SPG-9 (RAAD)



73 mm FSRA HEAT round is a Fin Stabilized Rocket Assisted High Explosive Anti Tank ammunition fired from its smooth bore Recoilless Launcher 73 mm.

Performance

Maximum range	1300 m
Effective range	800 m
Velocity (rocket booster) at 300m	690 ± 20 m/s
Muzzle velocity	415 ± 12 m/s
Penetration	300 mm, against RHA target at zero Obliquity, conforming to DEF-STAN 95/13-2

Technical Data

Length of rocket	1131 mm
Weight of rocket	4.6 Kg
Weight of projectile	2.7 Kg
Type and weight of charge	RDX /WAX, 0.31 Kg

Packing

Each warhead assembled with rocket motor placed in a polythene sleeve, while the expelling charge is separately placed in a nylon cylinder. 6 complete sets packed in a wooden box:

Size of Box	102 x 50 x 32 cm
Weight of box with 6 rockets	51.5 Kg (Approx)
Colour & marking	Service brown with yellow / white stenciling

Rockets

Rocket 122 mm HE (MBRL) YARMUK



Rocket 122mm HE (MBRL) is a ground to ground free flight artillery rocket fired from multi-tube launcher. It is used against personnel and light material, providing both fragmentation and blast.

Performance

Muzzle velocity	400 m/s (Approx)
Max. time of flight	78 sec
Range of Rocket	20 Km
Max. range without brake ring	20580 m
Max. range with small brake ring	15890 m
Max. range with large brake ring	11990 m
FUZE	Impact Tupe

Technical Data

Caliber	122 mm
Weight of filled warhead	18.4 Kg without Fuze 19.4 Kg with fuze
Weight of propellant	20.4 Kg double base
Total length of Rokat	2875 mm
Weight of complete rocket	66 Kg (Approx)
Weight of bursting charge	6.4 Kg

Packing

Each rocket packed in a polythene sleeve and subsequently in a wooden box. Two brake rings kept in a pocket in the lid of the wooden box. Nose Fuze packed in a separate chipboard container and also kept in the box. The gross weight of box is 90 Kg and size 323 x 21 x 23 cm

Mortar Bombs

Mortar Bomb

60 mm HE P2A1 & Smoke P2A3



These bombs are fired with 60 mm Mortar Model 1979 and available in versions.

1. HE Use against personnel
2. Smoke for screening and spotting purpose.

Performance

	HE	Smoke
Muzzle velocity	170 m/s	170 m/s
Pressure:	360 kg/cm ²	260 ± 10 Kg/cm ²
Range:	2075 m	1330 m
Accuracy:		
PE (Longitudinal)	1/70	1/60
PE (Lateral)	1/180	1/180
Smoke Duration		< 10 sec

Technical Data Complete Round

	HE	Smoke
Weight with Fuze	1.37 Kg (Approx)	1.5 Kg (Approx)
Length with Fuze	233 - 243 mm	240 ± 2 mm
Projectile		
Body material	Cast Iron	Cast Iron
Colour	Deep bronze green	Eau de nil – Sea Green
Main Charge	TNT: DNN (42:58), 112 gm	150 ± 20 gm (Approx)
Fuze	V 9 P1-A2 Impact fuze	V 9 P1-A2 Impact fuze

Other Components

Primary cartridge	Double base propellant	Double base propellant
Augmenting charge	5 ring shaped charges	3 ring shaped charges
Primer	No. 303 percussion type	No. 303 percussion type
Tail unit	10 steel fins	10 steel fins

Packing (HE)

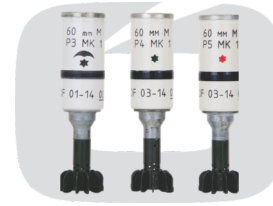
6 bombs are packed in waterproof chip/cardboard/plastic carrier with carrying handle and 3 x carriers (18 bombs) are further packed in a steel box: The gross weight of box is 39 Kg and size 54.6 x 26.7 x 26.7 cm

Packing (Smoke)

9 bombs are packed in waterproof chip/cardboard/plastic carrier with carrying handle and 2 x carriers (18 bombs) are further packed in a steel box: The gross weight of box is 43 Kg and size 61 x 27 x 26 cm

Mortar Bomb

60 mm Illuminating & Signal (Red & Green)



Canister Design Built In Fixed Delay (No Fuze)

These bombs are available in three types. Illuminating bombs are used for illumination during night missions while red & green bombs are used for signalling. Illuminating rounds are assembled with nylon/cotton parachute 840 mm, wide linked with a star Bi-metal wire rope covered with asbestos tube.

Performance

Star ejection height	183 m
Illuminating time:	
I. Illumination round	35 - 45 sec
II. Signal rounds	8 - 12 sec
Illumination power	125,000 to 150,000 cd

Technical Data Complete Round

Weight	1 Kg
Length	246 mm (Approx)
Diameter	60 mm
Color	White

Main charge

I. Illuminating	SR 562
II. Green Signal	SR 429
III. Red Signal	SR 406

Identification

Body material	Seamless steel tube
---------------	---------------------

Main charge

Illuminating	Parachute + Star
Signal Red	Red Star
Signal Green	Green Star

Other Components

Primary cartridge	Double base propellant WD 615, 3.2 gm
Augmenting charge	Double base propellant one ring shaped charges, 0.10 x 24/48 mm Weighting 3.1 gm
Percussion Primer	No. 303
Tail unit	10 steel fins

Packing

6 bombs are packed in waterproof chip/cardboard carrier with carrying handle. 3 x carriers (18 bombs) are further packed in a steel box. The gross weight of box is 30 Kg and size 56 x 28 x 26 cm

Mortar Bombs

Mortar Bomb

81 mm HE M57D A2 & Smoke M57 Da1



These bombs are fired with Hotchkiss Brandt mortars of the following types:

1. MO-81-61 C Short barrel
2. MO-81 -61 L Long barrel

The following version are available:

- a. HE Use against personnel
- b. Smoke for screening and spotting purpose.

Performance

	HE	Smoke
Velocity	291 m/s	291 m/s
Pressure:	570 kg/cm ²	570 kg/cm ²
Range:	4550 m max	4550 m max
Accuracy:		
PE (Longitudinal)	32 m	32 m
PE (Lateral)	7.5 m	7.5 m
Smoke Duration		35 sec (minimum)

Technical Data Complete Round

	HE	Smoke
Weight with Fuze	3.2 Kg	3.2 Kg
Length with Fuze	382 mm (Approx)	382 mm (Approx)

Projectile

	HE	Smoke
Body material	Forged steel	Forged steel
Colour	Olive drab / green	Eau-de-nil or sea green
Explosive charge	681 gm of TNT	650 ± 25 gm WP/YP
Priming Load/Exploader	56 ± 0.5 gm TNT 80.2 (2 x Pellets)	10 ± 3gm CE (1 x pellet)
Fuze	V 19 PA-A2,	V 19 PA-A2
Primary cartridge	Double base propellant	Double base propellant
Augmenting charge	7 horse shoe charges	7 horse shoe charges
Tail unit	10 Aluminium alloy fins	10 Aluminium alloy fins

Packing

HE

3 x bombs are packed in waterproof cardboard/plastic container with carrying handle and 2 carriers (6 bombs) are further packed in a steel box. The gross weight of box is 29 Kg and size 46 x 23 x 32 cm.

Smoke

3 x bombs are packed in waterproof cardboard/plastic container with carrying handle and 3 carriers (9 bombs) are further packed in a steel box. The gross weight of box is 50 Kg and size 34 x 34 x 44 cm.

Mortar Bomb

81 mm Illuminating, Signal (Red & Green)



Canister Design Built In Fixed Delay (No Fuze) These bombs are used with 81mm mortar and are available in three types. Illuminating bombs provide illumination during night while red & green bombs are used for signaling.

Illuminating rounds are assembled with nylon parachute of 1000mm diameter linked with a star through a zinc/ cadmium plated steel wire.

Performance

Illuminating	Average delay time for ejection of star 15 ± 1.5 sec. Average burning time of star 50 ± 8 sec.
Signal Red & Green	Average delay time of ejection of star 6 ± 1 sec. Average burning time of star 10 ± 2 sec.

Technical Data Complete Round

Weight	2.5 kg (Approx)
Length	318 mm (Approx)

Projectile

Body material	Seamless steel tube
---------------	---------------------

Identification

Illuminating	Parachute + Star
Signal Red	Red Star
Signal Green	Green Star

Main charge

Illuminating	Composition SR 562
Signal Red	Composition SR 406
Signal Green	Composition SR 429

Other Components

Primary cartridge	Double base propellant
Augmenting charge	3 horse shoe type charges containing double base propellant for illuminating & 1 for signal (Red & Green)
Tail unit	10 Aluminum alloy fins

Packing

3 bombs packed in waterproof chipboard/cardboard / Plastic carrier with carrying handle and 2 carriers (6 bombs) are further packed in a steel box: The gross weight is 25 Kg and size is 45.5 x 22.3 x 31.7 cm.

Mortar Bombs

Mortar Bombs

120 mm HE M44 A2 & Smoke M44 A1



These bombs are suitable for use with Mortar AM-50 (Brandt) with 1.75 meter barrel length. The following version are available:

1. HE Use against personnel)
2. Smoke for screening and spotting purpose.

Performance

	HE M44 A2	Smoke M44 A1
Muzzle velocity at charge 7	331 m/s	331 m/s
Max pressure	820 kg/cm ²	820 kg/cm ²
Chamber pressure for performance proof tests:		
Strength	920±20 kg/cm ²	920 ± 20 kg/cm ²
Charge stability	920±20 kg/cm ²	920 ± 20 kg/cm ²
Detonation	820 kg/cm ²	820 kg/cm ²
Max. range	6745 m	6745 m

Accuracy

PE (Range)	50 m	50 m
PE Lateral	13 m	13 m
SmokeDuration	60 Sec	

Technical Data Complete Round

	HE	Smoke
Weight of projectile as fired	13.0 Kg	13.0 kg
Length of projectile with Fuze	676 mm	676 mm

Projectile

Body material	Forged steel	Forged steel
Colour	Deep bronze green	Eau de nil
Exploder charge	TNT Pellets	C.E Pellets
Main Charge	TNT, 2.5 Kg	WP, 2.3 kg
Fuze	V 19P A2, SQ/delay	V19 P A2, SQ/delay

Projectile

Primary cartridge	CL-3, Ballistite 2.5	CL-3, Ballistite 2.5
Augmenting charge	Set of 07 Aug Carts = 01 set/chrng	Ballistite - 08
Tail unit	12 steel fins (6 pairs) 12 steel fins (6 pairs)	

Packing

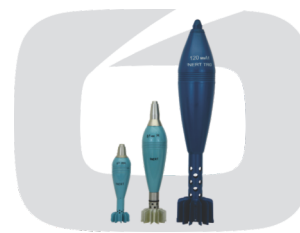
Each round packed individually in plastic tube alongwith fuze and aug charge (in plastic container) Two plastic tubes (two bombs) packed in a steel box.

HE: The gross weight of box is 42 Kg and size 82.0 x 32.3 x 15.8 cm.

Smoke: The gross weight of box is 47 Kg and size 79.5 x 33.6 x 34.4 cm.

Mortar Bombs

Training (Inert) 60, 81, 120 mm



Training (Inert) rounds are used to meet training needs of troops in short ranges at low cost. These bombs can be used minimum for 10 x times with charge of primary cartridges. These bombs are fired with their standard mortars.

Technical Data

	60 mm	81 mm	120 mm
Complete Round	60 mm	81 mm	120 mm
Weight with PRF (Kgs)	1.37	3.2	13
Length with PRF (mm)	240 ± 2	382	676
Projectile material	Cast Iron	Forged Steel	Forged Steel
Color	Arctic blue	Arctic blue	Deep saxe blue
Main charge	HES (Sand + Wax)	HES (Sand + Wax)	HES (Sand + Wax)
Fuze (PRF)	Alluminium Alloy	Alluminium Alloy	Forged Steel
Primary Charge	Double base propellant	Double base propellant	Double base propellant
Augmenting charge	Nil	Nil	Nil
Range (Meter)	180 ± 20 m	200 ± 20 m	200 ± 20 m
Primary Ctg	-	-	CL-4 Ballistite-2.5 Wt ~ 145 gm.

Packing

Size of Box (cm)	54.6 x 26.7 x 26.7	45.5 x 22.3 x 31.7	82.0 x 32.3 x 15.8
Weight of Box (Kgs)	39	29	39
No of Rds in box	18	06	02
Colour & Marking	Service brown with white stencilling		
Primary Packing	29.8 x 15.2 x 18.4 (cm) 8 kg	26.0 x 7.4 x 21.5 (cm) 4.50 kg	

Grenade Hand **AP HE P2 A1 (ARGES-84)**



This is designed to inflict massive damage against soft targets within its blast radius of 20 meters.

Technical Data (AP HE P2 A1)

Weight of the grenade	480 ± 20 gm
Body	Plastic with embedded steel balls
Length	115 ± 3 mm
Diameter	60 mm (Approx)
No. of steel balls	5000 (approx dia 2-2.3 mm)
Weight of the explosive	95 ± 5 gm of plasticized PETN
Effective range	20 mtr radius
Activation	Lever activated with delay time of 3.5 to 5 sec

Packing

Each grenade packed in a plastic container, 12 such containers packed in a steel box: The gross weight of box is 11 Kg and size 33.5 x 26.5 x 14.5 cm

Technical Data (P3 Mk1)

Weight	510 gm
Height	150 mm
Diameter	58 mm
Operation	Lever activated with delay time of 3.5 - 5 sec
Body	Tin sheet

Packing

Each grenade packed in a plastic container, 20 such containers are packed in a steel box having gross weight 22 Kg and size 60 x 29 x 19 cm

Grenade Hand **Discharger P3 MK1**



This is a lever operated non-bursting type grenade used for creating smoke screen.

Grenade Hand **Target Indication MK-2**



These grenades are used to generate coloured smoke for signalling activities of small units for short period of time.

Available in following colours:

White	P4 MK2 (JM)
Green	P5 MK2 (XL)
Blue	P6 MK2 (WL)
Orange	P7 MK2 (GG)
Red	P8 MK2 (PA)
Yellow	P9 MK2 (LK)

Technical Data

Weight	330 - 410 gm (Approx)
Height	144 mm
Diameter	56.5 mm
Operation	By releasing safety pin
Body	Steel drawn tube
Emission of smoke	50 ± 10 sec

Packing

Each grenade packed in a plastic container, 20 such containers are packed in a wooden/Steel box having gross weight 99 Kg and size 60 x 29 x 19 cm

Demolition

Charge Demolition No. 1, 6 Inch Beehive MK- 1



This charge is used for demolition of bunkers and similar RCC structures. The charge is detonated by detonator No. 27 with a suitable length of safety fuze or by electric detonator No. 33 or No.8.

Technical Data

Weight of explosive	3.2 Kg (Approx)
Charge	Compo B
Total weight	5.250 Kg (Approx)

Packing

2 charges packed in a cylinder and two cylinders (4 charges) packed in a wooden box having gross weight 34 Kg and size 51 x 44.5 x 26 cm

Demolition

Demolition 1 OZ CE Primer

Technical Data

Length	2.9 - 3.4
Weight	28.35 gm
Shape	Conical cylinder (Single perforation)

Packing

Each primer wrapped internally and externally with lead free paper. Top & bottom covered with lead free and waxed paper washers to make it completely waterproof. 10 primers packed in a metallic cylinder, 6 cylinders (60 primers) packed in a cardboard carton having gross weight is 8 Kg and size 37.4 x 15.3 x 18 cm

Pyrotechnics

Flare Trip Wire MK 2/2



This is a safety device used for giving a signal and light to people being protected by this arrangement. A spool of wire is supplied along with the device, which activates the mechanism when any hostile intruder or trespasser trips over the wire, a candle of illuminating composition is initiated.

Technical Data (Flare Trip Wire)

Height of flare candle	98 ± 1 mm
Diameter	62.5 mm
Primer	Percussion type ABC
Illuminating composition	SR 547
Time	Not less than 60 sec
Intensity	40,000 candles
Weight of complete flare	1.84 Kg

Packing

Each flare placed in carton, further packed in a tin box with arm link assembly and one trip wire spool with cardboard fitments. 12 flares packed in a steel box: The gross weight is 34 Kg and size 67 x 28 x 25 cm

Technical Data (Cartridge Signal)

Burning time	5.0 ± 1.0 Sec
Height to which ejected	70 m ~ 120 m

Packing

216 cartridges packed in a steel box having gross weight is 17 Kg and size 29.2 x 19.7 x 21.7 cm

Pyrotechnics

Cartridge Signal Pencil Shooting Type



These cartridges are meant for firing by a Shooting Pencil and are used for signalling during day or night. On firing, the star is propelled to the prescribed height and emits the specific colour of light.

Available in following types:

Red

Green

Illuminating

Note: Pencil Shooting Gun (Pyrotechnic Pistol) is also in production line of POF.

Fuze & Primers



Fuzes

Type	Utilization
No. 6 & 8 30 mm HEI API	
HE-1	37 mm HE/T
V9P1/A2 60 mm Mortar Bomb	
V 19 PA-A2 81 mm Mortar Bomb	
PDM 557 M 25 PDR	
PDM 557 105 mm HOW, 155 mm HOW, 8" How	
V 19 P A2 120 mm Mortar Bomb	
LIU 4	122 mm HOWT-54 & D-30
LIU 5	130 mm G
PF-1A Proximity	105 mm & 203 mm HOW, 155mm, 130 mm

Primers

Type	Utilization
Percussion type No. 304 A-1	122 mm HOW
Percussion type D-5	130 mm Gun & 122 mm HOW D-30
Percussion type MK2A4	155 mm HOW
Percussion type P-6	106 mm HEAT
Electric type L20 A1	105 mm APFSDS
No. 303	60,81 & 120 mm Mortars
No. 12 MK4/LA	37 mm HE/T
No. P1 Mk3	105 mm HOW
No. 330	30 mm Ball & HEI
Percussion type No. M-82	155 mm HOW & 8" HOW
Primer Percussion type P-5	100 mm APFSDS

Wah Brass Mills

We take pride to introduce Wah Brass Mills (Pvt) Ltd, formerly known as POF Brass Mills. Wah Brass is engaged in producing premium quality brass conforming to international standards, since 1954, for Pakistan Ordnance Factories and various other organizations of repute, as well as exporting to international markets.

Wah Brass owns newly installed production facility, equipped with state of the art Machinery, originated from EU, producing premium quality brass with efficient Manufacturing that could best satisfy the needs of our valued customers.

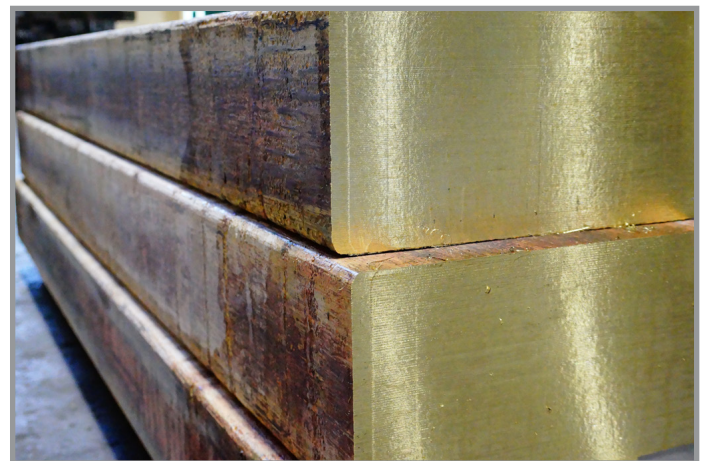
Wah Brass is capable of casting 24000 MT, which distinguishes us as one of the largest Brass, Gilding Metal and Gilding Metal Clad Steel catering needs of major industries in domestic and international markets.

Wah Brass is a name of superior quality, experience, variety and large production capacity to cater in time delivery, WAH BRASS, being producer of pre-eminent brass products has human capital having proven skills in foundry, extrusion, rolling and heat treatment.

Quality

At Wah Brass, quality ranks higher among all priorities. An in house Met Lab is a part of Wah Brass, equipped with most recent analytical equipment of the day. Wah Brass having in place the supply chain management systems coupled with QC, right from the supply of raw materials from the source to the supply of finished goods from our works, continuous sampling, testing and verification are conducted throughout the manufacturing process to ensure the quality is conforming to international standard.

With our Quality Policy serving as the foundation, Wah Brass takes an unyielding approach on quality. The quality guidelines are reviewed periodically for up-gradation to stay in compliance with the most international standards set for quality conformation worldwide.



Wah Brass Mills

Product Mix

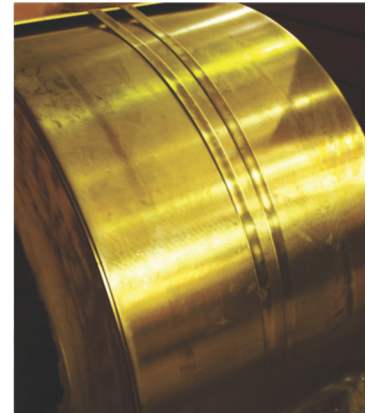
Brass Ingots/Billets	Gilding Metal Clad Steel Strip
Brass Coil	Brass Rods Round/ Hexagonal/Square
Brass Strip	Copper Rods Round /Hexagonal/Square
Brass Sheet	Brass Tubes
Brass Foil	Copper Tubes
Gilding Metal Coil	brass Pipes
Gilding Metal Strip	Copper Pipes
Gilding Metal Sheet	Coin Blanks
Gilding Metal Clad Steel Coil	Cups for Small Arms Ammunition
	Brass Discs for Artillery Ammunition

International Standards

Our products comply with following standards;
 BSI (British Standard Institutions)
 ASTM (American Society of Testing Materials)
 Defense Standards
 Mill Specs
 Any other requirement as per customer's order/demand

Industries We Serve

Sanitary Ware and Water Fittings
 Automobiles
 Metal Working/Light Engineering
 Sporting & Defense Ammo
 Garmenture
 AC & Refrigeration
 Ornamental
 Musical Instruments Industry



Military Explosives

S. No.	Type of Explosive	Specification
01	TNT	DEF-STAN 07-4/1(a)
02	RDX	DEF-STAN 07-23
03	COMPO B 1. RDX/TNT 60:40 2. RDX/TNT 70:30	CS 5446 (b) Pak Explo-38A (a)
04	RDX/WAX/AI No. 2 71:9:20	DEF-STAN 07-31
05	PE-3A (Plastic Explosives)	CS 2436 A(a)
06	PETN	DEF-STAN 07-08/1
07	PETN Plasticised	Pak Explo 31
08	Tetryl (CE)	DEF-STAN 13-165/1 07-12/1
09	Gun Powder G-7, G-12, G-20, G-40, GP-Mealed Sulphurless/ G.P Sulphurless/M.P	DEF-STAN 13-167/1 DEF-STAN 13-166/1
10	Styphnic Acid	DEF-STAN 07-50/1
11	Di-Nitro-Resorcinol	DEF-STAN 13-43 (b)
12	RDX/WAX 95:5 RDX/WAX 96:4 RDX/WAX 98:2	PAK EXPLO 32 PAK EXPLO 55
13	Strontium Peroxide	DEF-STAN 13-15/1
14	Primer Demolition 1 ox C.E MK2	L-10168A (b)

Propellants

Mortar Bombs and Rockets

S. No.	Description	Type & Shape of Propellants	Major Characteristic
Mortar Bombs			Double Base solvent less & smokeless propellants
01	Propellant for 60 mm Mortar	Strips 10-2.5x33mm Rings 10-24/48mm separation Disk 11-46 x 100mm	
02	Propellant for 81 mm Mortar	Ballistite GB Pa(1.5), 0.15x1x1mm	
03	Propellant for 120mm Mortar	Ballistite GB Pa(2.5), 0.2x2.5x2.5mm	
Rockets			
01	Propellant for 122mm Rocket (MBRL)	Types SQ-2, extruded single perforated cylindrical grains with ends face inhibition Front grain: L=893, O/D=103.5, I/D.24.5mm Rear grain: L=893, O/D=93.5, I/D.13.5mm	
02	Propellant for 40mm Anti Tank Rocket (RPG-7)	Double base solventless expelling and booster charges	
03	Propellant for cartridge RG 7.62 x 51 mm P2A1	Double base smokeless powder Ballistite 3.5	
04	Propellant for 73 mm (SPG-9)	Double base solventless expelling and booster charges	

Small Arms Ammunition

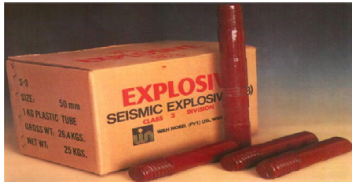
S. No.	Description	Type & Shape of Propellants	Major Characteristic
01	Propellant for 12.7mm (API/APIT)	HN 4/7 Single Base 7 perforated	Single Base Smokeless propellant
02	NC-1055 for 7.62 x 51 mm Ball & Tracer	Pak-Ammo - 86 (d) Pak-Ammo - 6 (F) (Ballistics) G3A3 and MG-3	Single base, Single perforated grains, deterrent coated
03	P-3 for 7.62 x 51 mm BLANK Ammo	Pak Ammo - 122 G3A3 and MG-3	Single base, cylindrical grains
04	Pyroxyle Powder for 7.62 x 39 mm Ammo	Pak Explo - 57 7.62 x 39 mm	Single base, Single perforated grains, deterrent coated
05	NC-1055 for 7.62 x 54 mm Ammo	Pak Ammo - 86 (d) 7.62 x 54 mm SMG Chinese Ammo	Single base, Single perforated grains, deterrent coated
06	NC-1111	TM-826 © 12 Bore Gun	Single base, square flakes
07	P-2 Mk-1Z & 2Z for 9mm	Pak Ammo - 142 Wallther Pistol and MP5A2 30 mm Aircraft Gun	Single base cylindrical grains
08	HN 5/7 Glazed (Chinese design)	WJ 17-67 (W) 30 mm Aircraft Gun	Single base, cylindrical grains

Guns & Howitzers Ammunition

S. No.	Description	Type & Shape of Propellants	Major Characteristic
01	Propellant for 37mm	HN 7/14 (Chinese design) for Single base 14 perforated resette grains	Single Base smokeless propellants
02	Prop MI SP & MP for 8" HOW	Single base with DNT single & 7 perforated grains	
03	4/1 & 9/7 for 122mm D-30 RRC	Single base single & 7 perforated grains	
04	12/1 & 9/7 for 130mm RRC	Single base single & 7 perforated grains	Double base solvent less & smokeless propellant
05	Full chg for 130mm	Single perforated cords Prop: 3-23/1-37	
06	Prop MI SP (0.0157" for 155mm SP HOW	Single base with DNT, single perforated grains with (flash reducing agent)	Single Base smokeless propellants
07	Prop MI MP (0.0336" for 155mm MP HOW	Single base with DNT, 7 perforated grains with flash reducing agent	
08	Prop MI SP (0.171" for 105mm HOW	Single base with DNT, single perforated	
09	Prop M1MP (0.043" for 105mm HOW	Single base with DNT, multi perforated	
10	Propellant 19/1-25 & 16/19 for 125mm APFSDS	Single base, single hole stick of 250mm length & 19 hole hexagonal grains	
11	Propellant 16/1-35 & 14/19 FOR 125MM TK HE	Single base, single hole stick of 350mm length & 19 hole hexagonal grains	
12	Propellant 4/1 & 9/7 for 122mm HOW	Single base, single hole grain & 7 hole grain	
13	Prop M6-MP (0.055" for 155mm HOW	Single base with DNT, cylindrical grains with 7 longitudinal perforations with flash reducing agent	
14	Prop 12/1-27 & 12/7 for 122mm D-30 FC	Single base, single hole sticks of 265mm length & 7 longitudinal perforations cylindrical grains	
15	Prop MI MP (0.0336" for 105mm TK HE	Single base multi perforated with DNT	

Commercial Explosives and Accessories

S-3 (Seismic Explosive)



Wabox



Wabofite



Wabonite



Wapril (ANFO)



Emulite-150/Emulite-150(G)



Leher Ignition System



Wabocord (Detonating Cord)



Safety Fuse



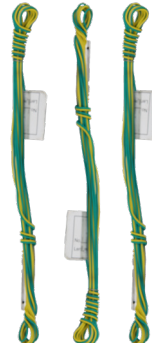
Seismic Emulite (ES-3)



Electric Detonator No. 8



MS/Hs Electric Delay Detonators



Military Uniforms/PLCE/Clothing Products

Clothing Factory employs state of the art equipment and technology to maintain consistency and quality. It also ensures a perfect finishes. Designing and cutting of all garments is carried out on the latest GGT CAD/CAM system. Stitching is done on the latest Japanese Sewing Machines.

Our Product Range

- Full Range of Military Garments
- Industrial Garments
- Anti Mosquito Nets (For tropical areas)
- Hospital Clothing
- Clothing for Danger Building (Explosive & Chemical Industries)
- Maintenance Covers
- Fabric Bags (Different Types)
- Trousers & Shirts
- Bullet Proof Jacket
- PLCE (Personal Load Carrying Equipment)



Ruck Sack



Ammo Carrier RPG-7



Chest Rig



Ammo Carrier



Military Hydration System



Pistol Holster



Detachable Small Field Pack



Water Bottle Cover



Entrenching Tool Cover



Frog for Scabbard



First Aid Medical Kit Pouch



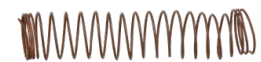
Bullet Proof Jacket



Non-Ferrous Products

Brass, Copper, Gilding metal, extruded & rolled materials.

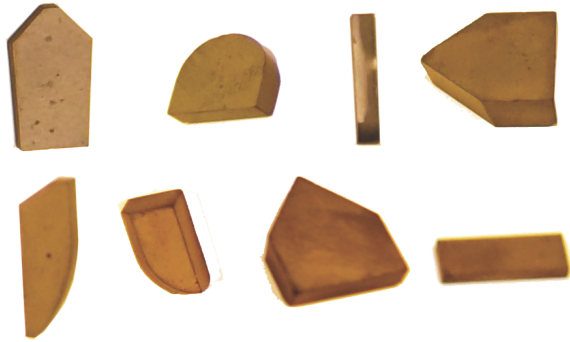
- 01 Rods, Bars & Wire Round 65 to 125 mm dia.
- 02 Hexagonal, square 6.5 to 65 mm across flats
- 03 Tubes Round 6 to 90 mm outer dia.
- 04 Square Tubes 27 to 90 mm outer dia.
- 05 Various shapes Area of cross section up to 64 sq. cm.
- 06 Plates 6.5 to 65 mm thickness
- 07 Strips 0.50 to 6 mm thickness
- 08 Foils 0.05 to 0.75 mm thickness
- 09 Sheets/Strips 0.5 to 25 mm thickness 25 mm to 600 mm in coil up to 600 kgs.
- 10 Gilding Metal clad steel strip 0.5 mm to 0.9 mm thickness, 250 mm wide in coils or strips.
- 11 Disc (Brass) For Cal. 30, 37, 100, 105, 122, 130, 125, 57 & 122 D-30
- 12 Ingots Brass, Copper Phosphorised and Gilding Metal to International Standard Specifications
Ingots of Dias 150 mm, 185 mm & 225 mm with 1 meter length (approx)
Billets sizes:-
i) 177 mm x 75 mm x 1M
ii) 300 mm x 75 mm x 1M
iii) 650 mm x 120 mm x 1M
iv) 340 mm x 120 mm x 1M
v) 280 mm x 160 mm x 1M
vi) 200 mm x 200 mm x 1450 mm



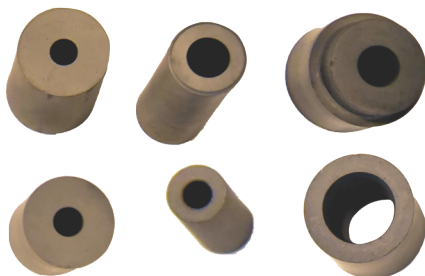
Miscellaneous Products

Tungston Carbide Products

Cemented Carbide Cutting Tools for Machining
 Indexable Inserts (ISO Standard)
 Brazable Tips
 Brazed Tip Tools
 Sintered Carbide Nibs / Die Blanks
 Special Tungsten Carbide Products / Wear Parts



Nozzles for Blasting
 Mechanical Seal for Centrifugal Pumps.
 Cutters for Polyester Fiber/Cigarette Industries.
 T.C Cores for Ceramic Industries
 T.C Teeth / Plates for Shaving Blade Industries.
 Cutting Bits for Asbestos Pipes/Sheets Industries.
 Special Tips for turning of Railway wheels/Sugar rollers for Sugar Industries.
 Surgical Tips (Without Serration) for Surgical Industries.
 Wear resistant Linings/Bushes
 Also any other Carbide Part required by the Customer.



Industrial Gasses

Compressed Hydrogen (H₂),
 Compressed Oxygen (O₂),

Plastic Packing Materials



POF's specializes in the supply of a wide range of sophisticated plastic packing and products for various ammunition. All the products produced undergo strict quality checks from raw materials to final product stage. All the products can be supplied in customized colours. Specifications of regular plastic products are given below:

S. No.	Product	Used For	Storage Capacity
01	BOX H-10P	7.62 x 51 mm link belt Ammo.	250 x link belted rds.
02	BOX H-14P	<ul style="list-style-type: none"> 7.62 x 51 mm CTN Ammo. 12.7 mm Ammo .50 Browning Ammo. 	100 x 7.62 x 51 rds.
03	18 / PA -1 TRIPLET Carrier	81 mm Mortar bomb (HE)	03 x Mortar bombs
04	60 mm TRIPLET Carrier	60 mm Mortar bomb (HE & ILLU)	06 x Mortar bombs
05	76 / PA-1 TUBLAR Packing with LIDS	120 mm Mortar bomb	01 Mortar bomb with Aug. Charge
06	52 / P Ammo. Container	Packing for Hand Grenade MK 1AP HE P2A1	01x Grenade
07	54 / P Mk1 Ammo. Container	Target Indication Grenade	01 x Tgt. Grenade
08	Holding Tray	<ul style="list-style-type: none"> 9x19 mm Parabellum Ammo. 30 mm Ammo 	50 rds.
09	PPRC & HDPE Pipes	20 mm to 63 mm	13 ft. Length / 200 mtr coil

Miscellaneous Products

Sporting Ammunition

Sporting Ammunition

12 Bore Shotgun Ammunition is being manufactured under the brand name of "Shaheen" and is best known for its quality among professionals and amateurs alike. The cartridge case and WADS are manufactured with special grade plastic (HDPE). Heads and Primers are manufactured with high quality Sheets meeting international standard. NC 1111 is used as the propelling charge to produce smokeless cartridges.

12 BORE SHOTGUN CARTRIDGES

Type of Shell	HUNTING RANGE					
	4	5	6	7	8	SG
Pellets Diameter (mm)	3.00	2.75	2.60	2.40	2.21	8.43
Short Load (grams)	31	31	31	31	31	31
Cartridge Length (mm)	58	58	58	58	58	64
Head Length (mm)	8	8	8	8	8	8
Velocity (m/sec)	290	290	290	290	290	305

PACKING 25 Nos. cartridges are packed in a cardboard box. 400 Nos. cartridges are packed in 16 boxes and further stuffed in a single corrugated carton, as follows:

- Corrugated board box size: L 333 mm x W 180 mm x H 222 mm 18.5 Kg.
For shot # 4 to 8 & BB Trap, Skeet, Super
- Corrugated board box size: L 348 mm x W 185 mm x H 220 mm
For AAA & Excel



								TARGET RANGE	
BB	AAA	4S	6S	8S	4E	6E	8E	7T	9SK
4.25	5.25	3.00	2.60	2.21	3.00	2.60	2.21	2.40	2.00
31	31	34	34	34	36	36	36	24	24
58	64	58	58	58	64	64	64	58	58
8	8	16	16	16	16	16	16	8	8
290	290	305	305	305	320	320	320	290	290

For Super Shots: 21.0 kg
For SG/LG & AAA Gross wt: 19.0 kg

HEAVY INDUSTRIES TAXILA



Solutions for
Armoured Vehicles -
from **Print to Build**



TANKS



APCs



ASVs



SPARE PARTS





Contents	Page. No
» History.....	45
» Production Facilities	45
» Design Centers.....	46
» Rebuilding / Upgradation of Tanks, APCs, ARVs and SP Guns	47
» Manufacturing and Rebuilding of Tank & Artillery Guns.....	47
» Electrical Systems.....	49
» Fire Control Systems.....	49
» Gun Control Systems	49
» Optronics & Optical Sights	50
» Mechanical Systems.....	51
» Gun Systems.....	53
» Tank Manufacturing Factory (TMF).....	54
» APC Manufacturing Factory (APCF).....	54
» Gun Manufacturing Factory (GF).....	55
» Heavy Rebuild Factory T-Series (HRF-T).....	55
» Development Engineering Support & Component Manufacturing.....	56
» Advance System Rebuild Factory (ASRF)	56
» Advance Research, Development & Information Center (ARDIC).....	56
• Tank Haider	
• Tank Al-Khalid-I	
• Tank Al-Zarrar	
» Armoured Personnel Carrier Talha	61
» Armoured Personnel Carrier Qaswa	62
» Armoured Security Vehicle Dragoon	64
» Ballastic/IED Protection - Military Vehicles.....	66
» Discreetly Armoured Commercial Vehicles	67
» Agri- Mechanization.....	71

HEAVY INDUSTRIES TAXILA



History

Heavy Industries Taxila was founded in 1971 as "Heavy Rebuild Factory (HRF)" with collaboration of NORINCO China for rebuild of tanks. In 1979, first Chinese Origin Tank T-59 was successfully rebuilt. HRF was later known as "Heavy Rebuild Factory - T Series (HRF-T)".

By 1992, it transformed into a large military industrial complex in multi-factory environment spanning over 1400 acres and renamed as Heavy Industries Taxila (HIT) with six production units having more than 200 engineers and 5000 skilled technicians. The ambit was expanded in 2007 with addition of an Advance Research Development and Information Centre (ARDIC) and an Advance System Rebuild Factory (ASRF).

HIT is proud to have manufactured over 1800 Armoured Fighting Vehicles (AFVs) and more than 400 Armoured Security Vehicles (ASVs) besides rebuild, upgradation and modernization of over 5000 AFVs for Armed Forces and LEAs both inland and abroad.

Today, HIT stands as a symbol of pride, quality and innovation with state of the art designing, simulation, development, manufacturing, training and testing facilities as per international standards.

Our Mission

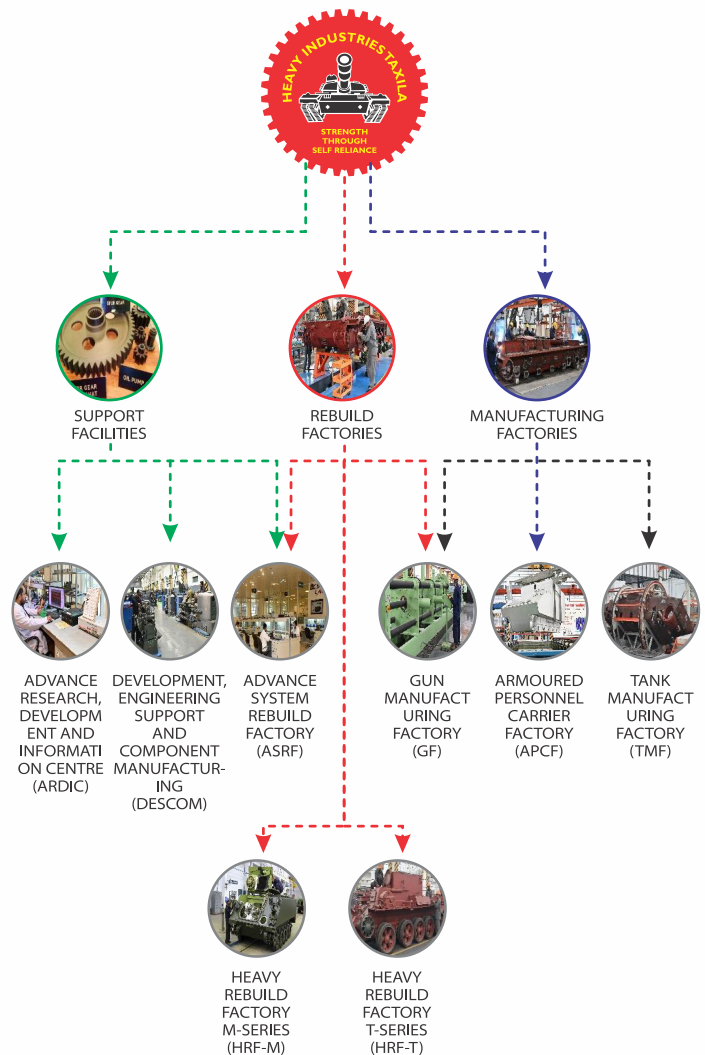
Manufacture, rebuild, upgrade and conduct R&D of Armored Vehicles with emphasis on self-reliance through indigenization and utilize HIT's commercial potential to meet requirements of civil sector and friendly countries.

HIT Organization

HIT is governed through a Board, headed by Chairman HITB. The Board comprising of five members, Member Production Control, Member Project Planning, Member Finance, Member Ministerial Coordination and Member Private. HIT Board runs HIT on sound administrative and management techniques to efficiently meet the requirements of defence production.



Production Facilities



Design Centres

HIT has variety of specialized testing facilities in line with international requirements. These facilities are extensively used by HIT and other public/private organizations to conduct R&D, material analysis, prototype qualification and testing / authentication of final products.

Mechanical Design Centre

- Design, analyze and validate engineering systems
- Simulation of new concepts and ideas or existing design (Static and Dynamic)
- Analysis of components, assemblies or overall product using

CAD tools such as AutoCAD, CREO, ANSYS etc.

- Inspection parts using 3D Scanners, Faro Arm and Coordinate Measuring Machines

Electrical Design Centre

Design and generate Gerber data for circuits using Altium Software and printing of PCB cards

Rapid Prototyping

Fused Deposition Machine (FDM) to create solid models directly from 3d CAD files (STL) using materials like ABS, Plastic & Polycarbonate



Manufacturing

HIT has the capability to manufacture state-of-the-art tanks, armoured vehicles and protection solutions, including:

Main Battle Tanks

- Tank Haider Tank
- Al-Khalid 1
- Tank Al-Khalid
- T-85IAP
- T-69IIMP

Armoured Personnel Carriers (APCs)

- M-113P
- APC Talha
- Command Vehicle 'SAKB'
- Logistics Vehicle 'AL-QASWA'
- Armoured Recovery Vehicle (ARV) 'Al-Hadeed'

Armoured Security Vehicles (ASVs)

- ASV Protector (B7-Level)
- ASV Mohafiz-V (B6-Level)



Personal Protection Equipment (PPEs)

- Bullet Proof Jackets (BPJs)
- Bullet Proof Helmets (BPHs)
- Bullet Proof Vests (BPVs)
- Armoured Guard Post 'Aahan'

Rebuilding / Upgradation of Tanks, APCs, ARVs and SP Guns

HIT is fully configured and capable of rebuild, upgrade and modernize Tanks / ARVs of Chinese (T-59, T-69, T-85, ARVW-653) & East European origin (T-80UD), APCs (M-113) and SP Guns (M109, M110). Rebuild process includes complete disassembly, testing / inspection of all assemblies, manufacturing / repair of unserviceable parts, final assembly and testing of tanks.

Overhauling of Engines

HIT has state of the art engine test benches and is fully equipped / capable of rebuilding and testing V-type Chinese Engines (520 HP, 580 HP & 730 HP) and Horizontally opposed Ukrainian Engines (6TD-I, 1000 HP & 6TD-II, 1200 HP). US origin engines of APCs and SP Guns (Detroit Diesel: 275 & 450 HP) are also overhauled at our facilities.



Manufacturing and Rebuilding of Tank & Artillery Guns

- Gun Factory stands at the forefront of advanced manufacturing, specializing in the production of premium-quality gun barrels.
- Our proficiency extends to the fabrication of tank and artillery gun barrels, exemplified by following: -
 - Meticulously crafted 105 mm mechanically autofrettage rifled tank gun barrels designed for T-59 & T-69 II MP tanks.
 - Precision-engineered 125 mm hydraulic autofrettage chrome-plated smooth bore tank gun barrels utilized in elite tanks including Al-Khalid, Al-Zarrar, T85IIAP, Haider,

T80UD and T72S.

- Our diverse capabilities encompass artillery gun barrels, offering options of 23 caliber, 39 caliber, and 52 caliber for 155 mm artillery guns.
- We excel in the production and rebuild of 125 mm smoothbore hydraulic autofrettage chrome-plated tank guns for Al-Zarrar, Al Kahlid, T85IIAP and Haider tanks.
- We are actively involved in the manufacturing of specialized tools and gauges tailored exclusively for the production of 155 mm artillery gun barrels.
- At Gun Factory, our unwavering commitment is to deliver impeccably engineered products that consistently meet and exceed the highest industry standards.





Ballistic Effect Testing Lab (BETL)

To authenticate full range of armoured products in controlled lab environment

Material Testing and Characterization

Materials Testing through spectrometer and wet analysis for ferrous and non-ferrous materials. Impact, Tensile and Hardness Testing of metals.

Polymer and Rubber Testing

Testing of the mechanical properties of textile, rubber, board and composite material to measure tensile strength, elongation, flexural Strength, compressive Strength

Calibration Facility

ISO certified calibration facility for mechanical gauges, pressure gauges, measurement tools and temperature sensors.



Manufacturing of Test Benches for Tanks

HIT has the capability of designing / manufacturing of test benches for different assemblies of tank systems. Test benches are designed / manufactured using latest available components / parts for easy sustenance / maintenance. These test benches test assemblies as per the ATPs.

Machining Capabilities

- CNC Machining & Turning
- Laser & EDM Cutting
- Tool Manufacturing
- Foundry & Casting
- Forging & Hammering
- Heat Treatment
- Surface Treatment
- Machine Maintenance
- Drawing & Design Centre
- Quality Control
- Technology Partners Engagement
- Engineering Management





Electrical Systems

- Silicon Rectifier
- Temperature Control Box
- Smoke Screen Control Box
- Thermal Smoke Screen Box
- KS2 Steering Lamp Control Box
- Gun Laying Control Box
- Starting Device (PUS-403)
- Relay Starter / Generator (RSG-716)
- Gear Locking Unit (BA-711)
- Regulator (RN-504)
- Alarming Unit (BAS-701)
- Road Signal Unit (KDS-710)
- Time Relay (RV-704)
- Electro Magnet for Gear Locking (EM-30)
- Optical Sensor (OD-1)
- Master Switch (VR-11)
- Harness assembly



Fan



Silicon Rectifier



Temperature Control Box



Fire Control Computer



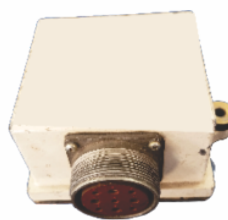
Met Sensor



Smoke Screen Control Box



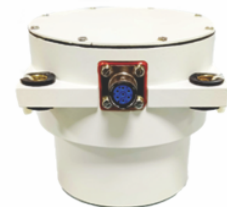
Ks2 Steering Lamp Control Box



Thermal Smoke Screen Box



Angular Velocity Sensor



Charge Temperature Sensor

Gun Control System

- Starting Distributor
- Transistor Driver
- PD Box
- Memory Unit
- Ammo Display Unit
- Anti-aircraft Machine Gun Horizontal Motor (ED-76)
- Anti-aircraft Machine Gun Vertical Motor (EDM-14)
- Gun Control Unit (BUK-1)
- Protection Unit (BZ-1)
- PT-800 with Regulator
- Turret Motor (EDM-16)
- Horizontal Drive Unit (BG-29)
- Vertical Drive Unit (BV-29)
- Gunner Panel (PN-43)
- Ammo Selector (IV-216)
- Joy Stick (BPV-29)
- Relay for Amplidyne (KP-1)
- Hatch Lock Sensor (DPL)
- Limit Sensor (D-30)
- Angle Limiter (OG)
- Switching Box (K2 Box)
- Conveyer Sensor (DPK-78)
- Turret Traversing Mechanism
- Smoke Screen (SPUZ-902)
- PP Actuating Device
- Linear Accelerometer
- Boiler Heating Motor (MBP-3N)
- Crew Fan Motor (DV-3)
- Fan Motor (MV-42)
- Blige Pump Motor (MVP-2A)
- Oil Pump Motor (MN-1)
- Electro Magnet for Commander Copula Locking (EK-718)



Vertical Drive Unit (BV-29)



Protection Unit (BZ-1)



PT-800 with Regulator



Memory Unit



Ammo Display Unit



Gun Control Unit (BUK-1)



Joy Stick (BPV-29)



Starting Distributor



Transistor Driver



Angle Limiter (OG)



Ammo Selector (IV-216)



Gunner Panel (PN-43)





Optronics & Optical Sights

Crew Vision Sights (Periscopes)

- Driver Periscope
- Commander Vision Block
- Gunner Periscope

Gunner and Commander Sight PCBs

- Image Stabilizing Circuit Board
- Bottom Circuit Board
- Gyroscope Power Board
- Laser Power Board
- Safety Circuit Board
- Azimuth Servo Board
- Elevation Circuit Board
- Logic Circuit Board

- Logic Servo Board
- Amplifying Circuit Board
- Gyroscope Circuit Board
- Counter Board
- Control Board
- Common Power Board
- Angular Velocity Board
- Code Receptor Board
- Electric Unit (Y7K)
- Time Interval Meter
- Indication Control Unit
- Electric Unit (TKN-4S)



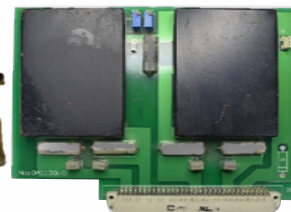
Commander Vision Block



Driver Periscope



Gunner Periscope



Gyroscope Power Board



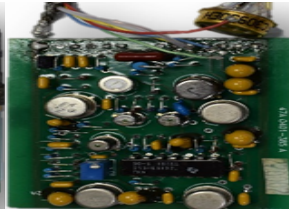
Image Stabilizing Circuit Board



Laser Power Board



Common Power Board



Amplifying Circuit Board



Logic Circuit Board

Mechanical Systems

Power Pack

- Gear All Types
- Oil Cooler
- Transfer Gear box
- Cam Shaft
- Cylinder Liner
- Water Pump
- Pistons

- Oil Pump
- Intake/Exhaust Valves
- Piston Rings
- Fuel Pipes
- Plunger/Sleeve (Fuel Pump)
- Intake/Exhaust Manifold
- Main Bearing
- Upper/Lower Shell
- Water Pump Drive
- Gear Bearing

- Fuel Booster Pump
- Tachometer Gen
- Drive
- Fuel Injection Pump
- Air Distributer Casing
- Injector Assembly
- Relief Valve
- Idle Gears
- Gaskets



Piston



Cylinder Liner



Oil Pump



Idler Gear



Super Charger



Bearing



Intake Manifold



Cam Shaft





Mechanical Systems

Running Gear

- Top Rollers Assembly for Track Support
- Rubber Pads
- Track Metallic Portion – Rubberized



Roller Assembly



Track Pad



Torsion Bar



Impeller Fan



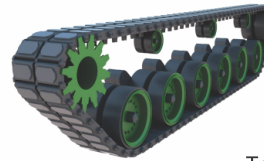
Radiator



Road Wheel



Sprocket



Track

- Shock Absorber
- Buffers

Heating & Cooling

- Radiators
- Impeller Fan

Mechanical Systems

Chassis

- Mud Guard Assembly
- Fender Assembly
- Smoke Grenade Launcher
- Fuel Tanks

- Turret Head
- Commander Cupola Base
- Commander Hatch Base
- Balance Arm Brackets
- Shock Absorber Brackets
- Turret Grill
- Top Roller Seat

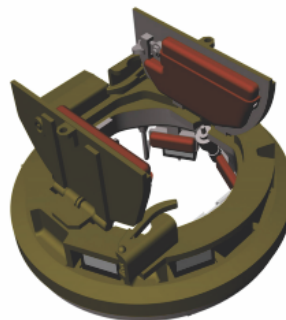
- Buffer Plates and Brackets
- Base Plates
- Skirt Plates
- Carousel Cassettes
- Tool Box



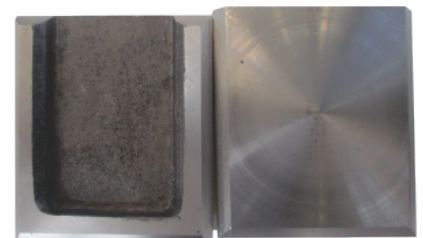
Commander Hatch Base



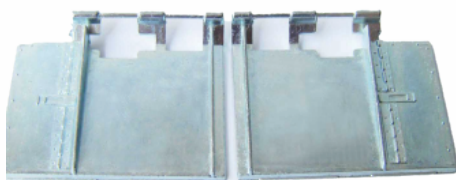
Buffer Bracket



Cupola Base



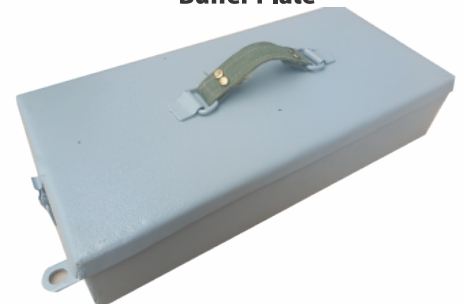
Buffer Plate



Mud Guard Assembly



Smoke Grenade Launcher



Tool Box





Mechanical Systems

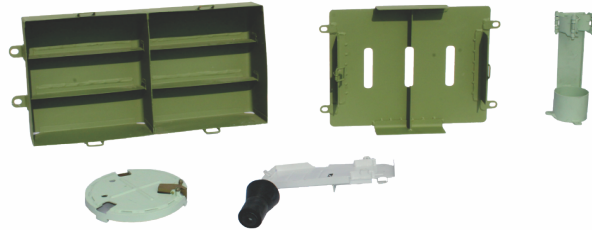
Small Arms Gun Mounting Assemblies

- Solid Structure
- Made as per Military Specifications
- Customizable Solution for all Vehicles
- Compatible for Wide Range of Small Arms



Ammunition Storage Racks

- Made as per Military Specifications
- Customizable Solution for all Type of Ammunition
- High Quality Steel
- Made to Fit



Bending and Seat Manufacturing of High Pressure Pipes

Gun System

Tank Gun Barrel

- 105 mm mechanically autofrettage rifled tank gun barrel
- 125 mm chrome plated hydraulic autofrettage smooth bore tank gun barrel

Artillery Gun Barrel

- 23 caliber, 155 mm artillery gun barrel
- 39 caliber, 155 mm artillery gun barrel
- 52 caliber, 155 mm artillery gun barrel



125 mm Tank Gun Barrel



105 mm Tank Gun Barrel



155 mm Artillery Gun Barrel





Gun System

125 mm Tank Gun

Comprises of following distinct sub-assemblies meticulously manufactured, assembled and rigorously tested at the HIT, adhering to the highest standards of quality

- Recuperator
- Recoil
- Barrel
- Bore Evacuator
- Cradle
- Safeguard

- Cartridge Case Ejector
- Elevating Mechanism
- Recoil & Wedge Contact
- Thermal Sleeve
- Breech Ring
- Breech Block
- Worm Wheel Casing & Box

At HIT, we also specialize in the manufacturing of following

- Steepled interrupted screw type breech blocks inclusive of the firing mechanism and breech ring for 155 mm artillery guns.
- Breech block and thermal sleeve for 125 mm T80UD and T72



Tools & Jigs

HIT excels in the market by offering not only the best quality product but also the widest range in tooling. HIT's cutting geometries are optimized to achieve high metal removal rates and long life in universal applications. Versatile tools designed for high performance and secure machining in a variety of materials applications component size and shapes allow high efficiency and production rate. Intensive research and development activities which precisely match your requirements and work processes are able to provide the solutions for

tomorrow. HIT offers following tools:-

- Index able Turning Tool holders
- Braze able Turning Tool
- End Mill Cutters Ø6~63mm
- Drill Ø8~50mm
- Reamer Ø8~50mm
- Tap M5~M52mm
- Counter Sink Ø8~40mm
- Counter Bore Ø8~40mm
- Side & Face Cutter
- Spline Hub Cutter
- Forging Dies
- Investment Casting Die

- Thread Rolling Die
- Gauges
- Machine Fixtures
- Drill Jigs

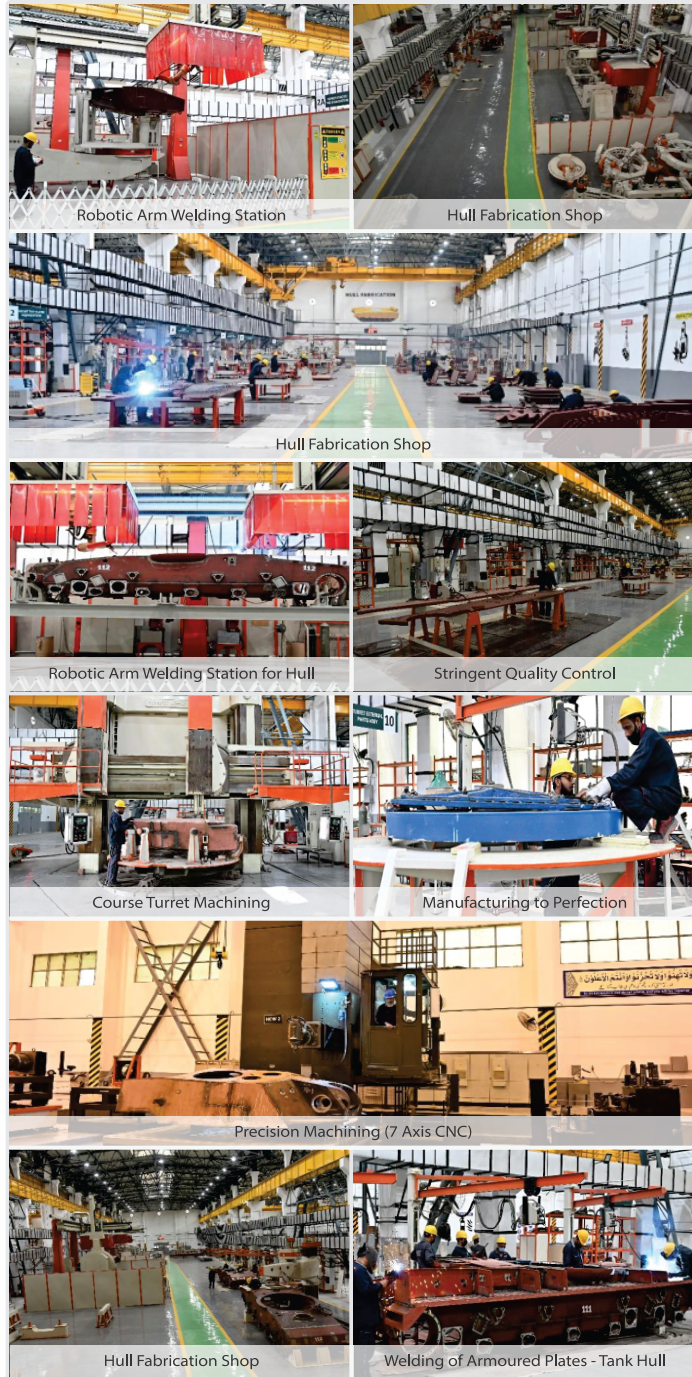


HEAVY INDUSTRIES TAXILA



Tank Manufacturing Factory (TMF)

Established in 1992 for manufacturing of new Tanks. Manufactured Tanks T69IIMP, T85IIP, Al-Khalid, Al-Khalid 1, and Armoured Recovery Vehicles (ARVs). It is equipped with state of the art CNC / modern production machines. The facility has been reconfigured for manufacturing new Tank Haider (based on Tank VT4 technology).



APC Manufacturing Factory (APCF)

Established in 1991. OEM of Armoured Personal Carrier (APCs) M113P - TALHA, SAKB, MAAZ, MOUZ, Armoured Security Vehicles (ASVs) - MOHAFIZ, PROTECTOR & INTERCEPTOR and Protection Enhancement Solutions for Tanks. It is equipped with state of the art designing and manufacturing facilities. Recently configured for manufacturing of ballistic / IED protection of Military and Commercial Vehicles.





HEAVY INDUSTRIES TAXILA

Gun Manufacturing Factory (GF)

Established in 1992. OEM of rifled / smooth bore 105 & 125mm Tank barrels and gun parts. A unique and highly sophisticated facility equipped with state of the art tank barrel manufacturing, autofrettage and chrome plating facilities. Being configured for large scale manufacturing of Artillery gun barrels & parts upto 155mm 52 Calibre.



Heavy Rebuild Factory T- Series (HRF-T)

Established in 1971 - The Mother Factory. Fully configured and capable of rebuild, upgrade and modernize tanks / ARVs of Chinese & East European origin. Rebuilt / upgraded Tanks T-59/69, Al-Zarrar, T85UG, T80UD, Al-Khalid and ARVW653.





HEAVY INDUSTRIES TAXILA

Development, Engineering Support & Component Manufacturing (DESCOM)

Established in 1973. Backbone engineering support facility for indigenous development of spares through In-house manufacturing facilities and Local industry. Equipped with industrial designing, machining, casting, forging, surface treatment, gear and precision manufacturing facility. Also manufactures Bullet Proof Jackets (BPJs), Bullet Proof Helmets (BPHs) and Bullet Proof Vests (BPVs).



Tanks/ APCs Parts Manufacturing

Specialized Machining Facility



Tools Manufacturing Shop



Gun Breech Block Machining

General Machining Facility

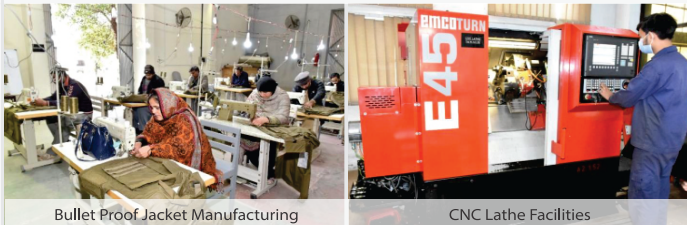


CNC Milling Facilities

Fabrication - Engine Intake Valve



EDM Wire Cut Facility



Bullet Proof Jacket Manufacturing

CNC Lathe Facilities

Advance System Rebuild Factory (ASRF)

Established in 2007. A state of the art, modern and specialized support facility for R&D, manufacturing and refurbishment of Fire Control Systems (FCS), Gun Control Systems (GCS), Optronics, Hydraulics and Electronics / Electric sub systems of Armoured Fighting Vehicles.



Fire Control System Lab

Tank Haider Simulation Lab



Tank Al Khalid Simulation Lab

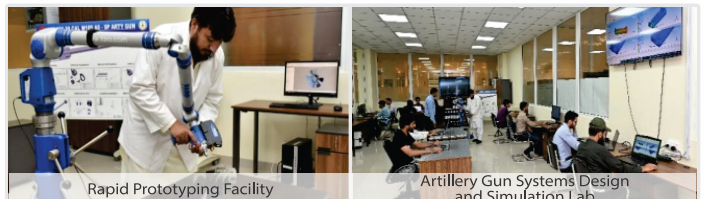


Inspection and Testing Facilities

Manufacturing / Refurbishment of Electric Harnesses

Advance Research, Development & Information Centre (ARDIC)

Established in 2007. A highly sophisticated R&D and support facility capable of industrial designing, prototyping, material analysis, ballistic effects testing and re-engineering. Being upgraded as Centre of Excellence for Design and Integration of Combat Solutions for Military Equipment.

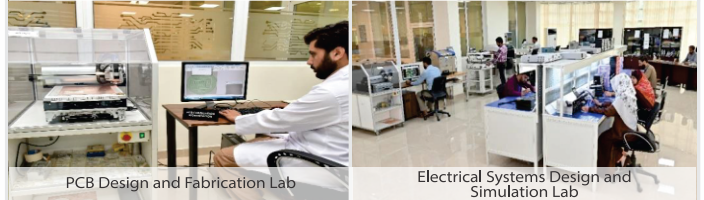


Rapid Prototyping Facility

Artillery Gun Systems Design and Simulation Lab



Tank Systems Design and Simulation Lab



PCB Design and Fabrication Lab

Electrical Systems Design and Simulation Lab



HEAVY INDUSTRIES TAXILA



Tank Haider



Characteristics

General Specification

Combat weight	53±1ton
Crew	3
Engine power	1200hp
Power-to-weight ratio	22.64 hp / ton
Mean pressure to ground of track	2.85kg/cm ²
Cruising range	300-350 km
(with additional fuel barrel)	400-450 km

Power Pack

Type	Four-stroke, Turbocharged, Intercooled, Electronically Controlled Diesel Engine
Rated Power	1200hp Dynamic-static hydraulic combined steering

Running Gear

Track	Metal with removable rubber pad pivot turning available
-------	---

Suspension System

Type	Torsion Bars, Shock Absorbers
Bump Stop	Hydraulic Buffer

Mobility / Performance

Maximum speed on highway	70 km/h
Cross-country speed	35-45 km/h
Maximum reverse speed	Maximum-16.5 km/h
Trench clearance	2.7m
Vertical obstacle negotiation	0.85m
Gradient / Side Slope	60% / 40%

Fire Power

Main gun caliber	125mm smooth bore
Co-axial MG	7.62 mm
AAMG	12.7 mm, Remotely Controlled, Automatic Tracking, Measuring and Setting Range

Auto Loader

Automatic and digitized

Ammunition

Main Gun Ammunition

APFSDS, HE, HEAT, Guided / Gun-launched Missile.
38 rounds

On board number of ammo

Muzzle Reference System

Equipped with MRS
AAMG Sighting System.

AAMG can be remotely controlled to acquire track a target, measure and set the range automatically.

Protection

Armour protection
Secondary Protection

Composite armor
Secondary Protection Anti-thermal / IR paint
Smoke screen discharging system
Laser Warning System integrated with smoke launcher
Collective NBC Protection with Radiation detector
Automatic; in engine compartment, fighting compartment and driver compartment

NBC

Fire Extinguishing and Explosion Suppression

FCS / GCS

Gunner's Day sight Type

Independent bi-axis stabilized with independent FOV stabilization with HMSS
Wide FOV - 100 / 6x
Narrow FOV - 60 / 10x
Thermal Imager (576x4)
Target detection - 12.2km minimum
Target recognition - 4.5km minimum
Target identification - 2.4km minimum

FOV / Magnification

Gunner's Night sight type
Night Sight Range

Commander Sight

Views of Gunner's day sight and TI sight are available with Commander through Display / Control Terminal
60m to 2500m

LRF

Misc

- Front / Rear View System
- GPS and INDS are installed
- Advanced vehicle-borne information system
- Air Conditioning





Tank Al-Khalid-I



Characteristics General

Combat Weight	46-48 Ton
Crew	34
Cruising range	430 Km
Power to weight Ratio	26:1
MMP	~260 KN/M ²

Power Pack (Ukraine 6TD-II)

Rated Power	882 Kw (1200 HP)
Cooling	Water Cooled
Fuel	Diesel (Multiple Fuel)
Transmission Type	Hydraulically Operated Manual Shift Multiple Reverse Speed Pivot/ Skid Planetary Type

Running Gear

Tracks	Rubber Bushed & Padded (Replaceable)
--------	---

Suspension

Type	Shock Absorber & Torsion Bars
Bump Stop	Hydraulic Buffer

Performance

Max Speed	70km/h
Acceleration	0-32 kmph in 10~200 Sec
Trench crossing	>2.7 m
Obstacle crossing	>0.85 m
Gradient/Side Slope	60%/40%

Armament

Main Gun	125mm Smooth Bore, Chrome Plated Autofrettaged Ammunition type Separately Loaded (Split Type) APFSDS, HEAT, HE
Co-Axial MG	7.62mm
AAMG	12.7 mm, Remote Firing, Auto Tracking

Ammunition

Main Gun	39+10
AAMG Remote	1000 Rounds
Control	4000 Rounds
Co-Axial MG	12 (8 Smokes, 4 Shrapnel)

Auto Loader

Type	Circular Carousel (Cassete Type)
No of Rounds	22
Rate of Loading	6~8 Round /Minute
Control	Solid State

FCS/GCS

Type	Image Stabilized
Optics	Laser Protected

FCC

Multi Process configuration	
Electrical display screen	
Key type Push Button	

Commander Sight

Type	Panoramic Bi-Axis Stabilized, LRF, 2nd Generation IIT, Hunter Killer Capability
------	--

Magnification

Field of View	Dual 6 ^x to 10 ^x 10° to 6°
---------------	--

Head Mirror Stabilized Gunner Sight (HMSS)

Type	Independent Bi-Axis
Day	Image-Stabilized
Magnification	Dual. 6 ^x to 10 ^x
Field of view	10° to 6°

LRF

Type	NDYAG
Range	200-10,000m

Auto Tracker

Tracking error	> 0.1 mils
Interfaced with	Gunner & TI Sight
Target Locking	Auto / Manual

Protection

Armour	Composite (Frontal ARC)
NBC	Pressurized
Screen	Installed
Anti IR Paint	Being Used

Misc

- Air Conditioner
- Auxiliary Power Unit
- Improved Muzzle Reference System
- FDU-Refueling Rate (70+10lit/min)
- Fuel-Multi Fuel (Diesel, Petrol, Kerosene Oil)
- Torque Multiplier Track Adjuster
- Digital Driver Panel
- Solid State Auto loader (SSAL)
- Improved fire Extinguishing & Explosion suppression thermal Smoke
- Improved Radiation Detector
- Armour Protection (ERA)
- DNVDs (TI Based)

Additional Add Ons

- Integrated Battle field Management System





Tank Al-Zarrar



Up Gradation

In order to enable T-59 Tank to remain current, an up gradation project named Al-Zarrar was conceived exploiting its maximum stretch potential. A number of proto-types were developed on sound R&D basis for comparative evaluation and trials to ascertain viability of up gradation / performance improvements. On successful completion of trials, series production commenced with effect from January 2003.

Characteristics

General:

Combat weight	42.7 Tons with rubber track & extra fuel barrel
Crew	4
Power to weight ratio	17.1 Hp/Ton
Maximum Torque/rpm	305 Kg/1300-1400rpm
Engine Horse power	730 HP Diesel Engine
Maximum Speed	55 km/h
Cruising range gradient	400 Km (with extra barrels) 60%
Vertical Obstacle	0.8m
Fording	1.4m

Running gear Suspension

Track	Rubber
Support Roller	3 each side
Shock Absorber	Friction type
Torsion Bars	10
Buffer Cylinder	4 (2xeach side)

Armaments

Main Gun	125mm Smooth Bore
Projectiles	APFSDS, HEAT, HE
Co-axial MG	7.62 mm
AA MG	12.7 mm
Loading System	Semi auto Loading/ Ramming System

ISFCS	Image Stabilized Fire Control System with Laser Range Finder (LRF) and Ballistic Comput
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Firing Capability	S-S, S-M, M-M, M-S
Protection	Fire Extinguishing and Explosion Suppression System. Thermal Smoke Screen. Add-on Armour/ Explosive Reactive Armour.

Composition of Thetis System

THETIS system is composed of the following assemblies:

- 2nd generation Thermal Imager (CT2G)
- System Control Panel (SCP)
- Gunner Display Unit (GDU)
- Commander Display Unit (CDU)
- Installation kit

CT2G Thermal Imager is an optical equipment that operates in LWIR band (7.7 to 10.3um) and allows observation, detection and recognition of target during the night, or in poor daytime visibility condition.

Field of View

Wide	8° x 6°
Narrow	3.2° x 2.4°

Range

Detection	6000m
Recognition	3500m
Identification	1500m
Detector Configuration	288x4

Operation Modes of Thetis System

- IS Mode
- SFCS Mode
- Emergency Mode

Special Features

- 20/30mm high performance II Tube
- Muzzle Flash Protection Circuit
- Standard "AA" size batteries used
- Rugged Military Design

Technical Specifications

- Periscopic, High Performance
 - Biocular, Large diameter, rubber padded, permits two eye viewing
 - Magnification
 - FOV
 - Rotation
 - Resolution
 - Automatic Brightness Control
 - Effective Range
 - MRS Facility Available
- | |
|-----------------------|
| Unity |
| 38±2° |
| Left & Right each 35° |
| 40LP/mm |
| Yes |
| 250m |
| Standard |





Armoured Personnel Carrier M113P (With 12.7 mm Protection)



Characteristics

Armour System

Bolt-on spaced/oblique light weight ballistic steel armour system.

Protection of Vehicle

12.7mm AA Gun API rounds at a distance of 50 meters with straight line of fire. Modular shape with basic APC hull divided into 6 x main regions.

Multi-Hit Capability

Designed armour provides excellent multi-hit capability and each panel can sustain multiple shots.

Mounting System

Armour plates mounted on vehicle through bolt on system relying on Aluminum Armour Frames System bolted through special inserts. It allows easy installation and positioning in field conditions also serve as additional protection at interfaces.

Rotating Turret

With 2 view glasses providing protection against 12.7mm API rounds and has the ability to engage targets all around (360°).

Technical Specifications

Engine	Detroit 265 HP
Transmission	Allison TX100-1A
Seating Capacity	2+10(12)
Base Armour	Ballistic Aluminium
Add on Armour	Ballistic Steel Based Spaced Armour
Turret	360°Rotation
Net WT of Add On Armour	875 Kg
Pay Load	1500 Kg
Fuel Tank	Internal
Power / WT Ratio	22.34 HP/Ton
Protection	12.7 MM API at 50 meters distance

Technical Specifications of Armour

Feature	Type of Armour	Panels
1 Upper side Plate	Spaced inclined Armour	6 (each side)
2 Lower side plate	Spaced inclined Armour	6 (each side)
3 Upper Nose plate	Applique Armour	5
4 Lower Nose Plate	Spaced Armour	1
5 Front Straight Plates	Spaced Armour	2
6 Rear Plate	Spaced Armour	3
7 Turret	Spaced Armour	1

Main Characteristic General

Weight, combat loaded	11,860 kg
Weight, Curb	10,360 kg
Length	190 Inches
Width	122.06 Inches
Height without Turret	73 Inches
Height with Turret	97.5 Inches

Performance

Speed (Level land)	62 Km/hr
Acceleration (0-32) Kmph	9 Second
Gradient	60%
Side Slope Negotiation	30%
Drift	(3 feet in 100 feet while traveling between 20-30 mph)
Braking Distance at Speed (32-0 km/h)	26 feet





Armoured Personnel Carrier Talha



APC TALHA is indigenously designed, incorporating major features of M113 family of vehicles, the most widely used APCs in the world. The improved version of APC TALHA has been especially designed for Law Enforcing Agencies (LEAs) to meet their amphibious, anti-riot and anti-insurgency requirements having optional 12.7 mm machine gun as its main armament.

Turret: The improved version APC TALHA has an overhead protected 360° rotating turret, providing B6 level of protection, fitted with mount for 7.62 mm machine gun (with option of 12.7 mm machine gun). The turret has bullet proof glass, view ports and is fitted with a search light to facilitate all around visibility and fire control by commander / gunner.

- Protection level of turret is B6 (7.62 mm NATO ball) which can be enhanced up to B7 level protection (7.62 mm Armour Piercing Round) or against 12.7 mm API at 50 meters which ever is desired by the customer.
- Turret can rotate 360° for all round target engagements.
- Fitted with three bullet proof glass view ports to provide all round visibility.
- Can be fitted with 360° rotating search light.

Fire Capability and Protection: Adequate crew compartment space provides excellent crew comfort. Firing capability has been enhanced by providing 3 x firing / view ports on each side along with bullet proof glasses for better operational area reconnaissance as well as combating the miscreants with effective fire power. An add on armour providing protection against 12.7 mm API from 50 meters can be installed to further strengthen the protection level.

- Seven view ports comprising of Bullet Proof Glass (protection level as of APC), located three on each side and one at rear.
- Six Firing Ports, three on each side located below the view ports and an MG firing port located in the turret to engage targets.

Characteristics General

Weight, combat loaded	11.764 tons
Weight, curb	10.34 tons
Length	217 inches
Width	100 inches
Height	73 inches
Personnel capacity	13 (including driver)
Fuel tank capacity	95 Gal (360 Liters)
View ports	3 each sides, 1 at rear
Firing ports	3 each side

Engine

Make, model and type	Detroit Diesel 6 V53T, two stroke cycle
Rated horse power	265 HP

Gross horse power to combat weight ratio	22.94:1 HP/ton
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Transmission

Make and model	Allison TX100-1A
Type	Automatic, 3 speed
Steering	Differential or pivot break
Pivot break type	Disc

Performance

Speed (level ground)	42 mph (67.59 km/h)
Speed (10% slope)	16.2 mph (26.1 km/h)
Turning radius	Pivot to infinite
Slope	60%
Side slope	30%
Number of wheels	5 pairs each side
Shock absorbers	3 per side

Armour

5083 Aluminum

Running gear

Suspension type	Torsion bar
Springing media	Steel torsion bar
Wheel size	24"
Track type	Steel single pin with detachable rubber pads
Number of shoes	63 left side 64 right side

Electrical system

Alternator	100 Amps/28volts DC
Batteries	2x12 V each

Fire extinguisher

CO₂-fixed type in Engine Compartment and portable type in crew compartment.

Armament

7.62/12.7mm MG

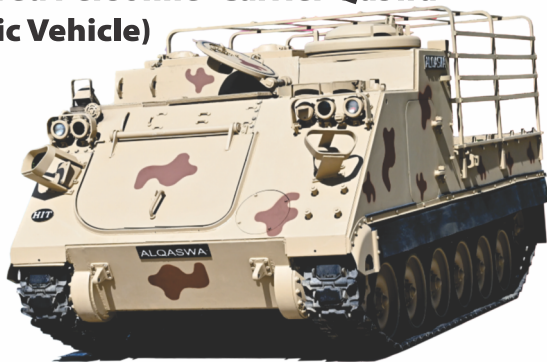
Optional equipment

Search light
Revolving light
Public Address Equipment
Smoke /Anti Riot Tear Gas Grenade Launcher
Hooter
Communication Equipment (Motorola)





Armoured Personnel Carrier Qaswa (Logistic Vehicle)



ARC M113P is a proven vehicle whose derivatives can be as useful as the vehicle itself. Logistic vehicle with a stretched hull is one such derivative which would significantly enhance logistic compatibility with operational echelons. The logistic Vehicle designed and manufactured at HIT is characterized by unique features. It is light weight with armour protection for crew and resembles a flatbed truck in both appearance and application. It uses the M11 3P power plant, track and suspension to ensure commonality. The Logistic Vehicle can be used for carrying of POL, rations, ammunition and supplies across all types of cross-country terrain. The cargo compartment which can carry a load of 6 tons can be protected with a tarpaulin cover. The vehicle platform can also be used for other adaptations such as weapon station, missile launcher, radar, TCV, ambulance, maintenance vehicles etc.

Characteristics General:

Length	5.6 M
Width	2.54 M
Height	2.6 M
Crew	2 (1 X Driver, 1 X Commander)
Curb Weight	10.345 Ton
Combat Weight	14.5 Ton

Performance:

Speed (Level Land)	35 Km / H
Gradient	60%
Side Slope	30%
Trench	1.6 M
Water Fording	Amphibious

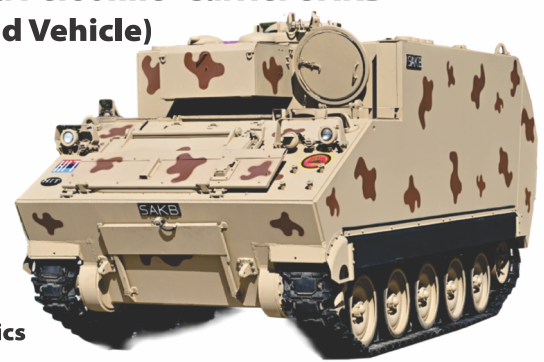
Power Pack

Engine	265 HP
Transmission	Automatic
Pivot Break Type	Disc

Protection

Armour	Aluminum Alloy
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Armoured Personnel Carrier SAKB (Command Vehicle)



Characteristics General:

Length	5.5 M
Width	2.54 M
Height with Comd Cupola	2.8
Weight Combat loaded	13.2 ton
Weight Curb	12.5 ton
Personal Capacity	03 (including driver)
Fuel Tank Capacity	410 Litres
Amphibious Condition	Yes
Cruising Range	300 Km
Nominal Ground Pressure	7.79 psi
vertical Wall	24 inches
Trench	66 inches

Performance

Speed (Level Land)	40 km/h
Speed (In Water)	5 km/h
Turning Radius	Pivot to infinite
Slope	60%
Side Slope	30%
Trench	1.6 M
Water Fording	Amphibious

Engine

Make and Model	Detroit Diesel 6V 53
Type	Two Stroke Cycle
Fuel	Diesel
Rated Horse Power	212 HP
HP Weight Ratio	16.9 HP/Ton

Transmission

Make and Model	Allison TX 100 -1
Type	Automatic, 3 speed
Steering	Differential or Pivot Brake
Pivot Brake Type	Disc

Protection

Aluminum	5083 Series
Armour	Aluminum Alloy





Running Gear

Suspension Type	Torsion Bar
Springing Media	Steel Torsion Bar
Number of Wheels	5 Pairs each side
Wheel Size	24 Inches
Track Type	Steering single pin with detachable rubber pads
Shock Absorbers	3 per side

Final Drive

Type	Gear
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Electric System

Alternator	100
Amperes	28
Voltage (DC) Batteries	2x12 V EACH

Fire Extinguisher

Fixed	CO ₂ in engine compartment
Portable	CO ₂ in crew compartment
Armament	.50 inch cal/12.7mm cal mag

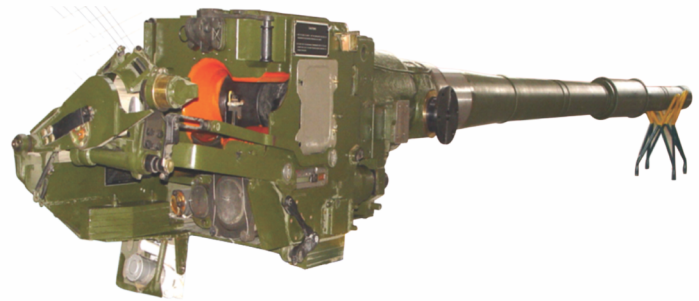
Special Features

- Customized Rack for C⁴-I
- Sliding/Fixed Type Map Boards
- Adjustable Table Cum Bed
- Rotating Cupola For all round Defence

Optional Features

- Auxillary Power Unit (APU)
- Air Conditioner
- Add on Armour
- Spall Liner
- NBC KIT

125 mm Smooth Bore Tank Gun



Characteristics

Material	Breech Ring	Breech Block
Weight of forging blank	PCrNi3MoVA	PCrNi3MoV
Weight of finished blank	1400 kg	200 kg
No of Operations	572.5kg	63.17 kg
	79	69

General

Caliber	125mm
Barrel Length	6000 mm
Weight of Gun	2500 kg
Elevation	14°
Depression	6°
Rate of Fire	6 ~ 8 RPM with auto loader
Firing System	Manual & Electrical

Major Items Produced At HIT

- Barrel 125 mm (Autofrettaged / Chrome Plated)
- Barrel 105 mm (Autofrettaged / Rifled)
- Breech Ring
- Breech Block
- Varieties of Smaller Components

Type of Ammunition	A/U	APFSDS	HEAT, FS	HE
Firing Range (Effective)	Meters	2000	2000	2000
Chamber Pressure (Normal Charge)	Mpa	470.7	294.2	343.2
Chamber Pressure (Super Charge)	Mpa	434.5 ± 4.9	333.4	377.3 ± 3.92
Muzzle Velocity	Meter/second	1730	905	850
Weight of Complete Shell	kg	21	29	33
Service Life of Barrel	500 Rounds at a ratio of 4	APFSDS: 3HE,	FS: 3 HEAT, FS	



Armoured Security Vehicle Dagoon



Characteristics

General:

	Existing Model	New Model
Length	6.02 M	6.5 M
Width	2.55 M	2.55 M
Height with Comd Cupola	2.32 M	2.3 M
Crew	9	11
Curb Weight	9.6 Tons W/O Turret	11.5 Ton
Combat Weight	12.5 Ton	14.5 Ton

Performance:

Speed	105 Km / H	105 Km / H
Gradient	60 %	60 %
Side Slope	30 %	30 %
Trench	1 M	1 M
Fording Depth	Amphibious	1.5 M
Step Fording	Amphibious	1.50 M

Power Pack

Engine	300 HP	375 HP
Transmission	5 Speed Automatic	6 Speed Automatic

Protection

		Options
Ballistic Protection	Stanag Level III (with Add On Armr)	<ul style="list-style-type: none"> • Stanag Level III • Level 3+ (Incl - 0.52 Cap Ap) • Stanag Level IV
Run Flat Tyres	As Per Finabel Standard	Level 4A / 4B As Per Finabel Standard

Standard Feature

Air Conditioning System	Provided	Provided
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Armoured Security Vehicle Protector (B7 Level Protection)



Maximum Protection with Minimum Weight

Armoured Security Vehicle Protector, design & manufactured at HIT is based on the chassis of commercial vehicle using light weight composite armour. The hull is protected against 7.62x51mm steel core bullet at 10 meter range.

Characteristics

Engine Type	Water cooled Turbo-Diesel inter - cooled, 8 cylinder, 150 KW (200 HP), at 3400 rpm
Transmission Type	Manual, 5-speed forward and 1-reverse
Drive System	4-wheel drive (4x4)
Ground Clearance	200 mm
Brake System	Hydraulic power assisted brakes (Upgraded)
Seating Capacity	8(2 + 6)
Suspension	Heavy duty (Upgraded)
Tires	Run - flat tyres (4 + spare); shall meet the NATO / FINABEL speed and distance standard of 50Km at 50 km/h (Inserts will be from reputed firm).
Steering	Power Assisted
Electrical System	12V DC, 100 AMP or better
Exhaust Fan	1

Body Protection

Provide protection against 7.62x51, M80 NATO P - 80, M61 AP ammunition and tested to meet N.I.J. Standard 0108-1 Level IV and CEN EURO NORM 1063 B - 7



HEAVY INDUSTRIES TAXILA



Seating Arrangement	Type and arrangement of seating is not specific but shall be consistent with gun port accessibility and room for turret. All seats have seat belts.
Bullet Proof Glass	Windscreen, side glasses and view ports protected against B - 7 / NIJ - STD - 01 08 01 level IV duly covered by steel mesh provided with 80% clarity.
Firing Ports	Will provide an ergonomic and practical location based in the internal layout of the proposed vehicle.
Firing Hatches	2
Rifle Racks	Vertical rack(s) for a total of 5 full stock of AK-47 rifles.
Ammunition Boxes	2
Turret	Centered position, Manned turret with B-7 standard armour protection. The turret will have a demountable seat; minimum 14" height with hatch cover; 360 degree rotation and adaptable for LMG installation
Tools	Standard vehicle tools
Air Conditioner	Available (Optimum air conditioning will be assured)
Lifting and Towing Hooks	Standard
Fire Extinguishers	2
First Aid Box	1
Public Address System	1
Revolving Light/Bar Light	1
Color	As per user requirement
Search Light	1
Siren System	1
Bumpers	Heavy duty front bumper, RAM style; heavy duty rear bumper with rear steps
Fuel tank Protection	Yes (Capacity 90 liter)
Running board and hand rail system to provide quick extraction of pedestrian personnel without entering the vehicle	Yes
Lights Protection	Head lights, rear brake lights, indicators and back lights protected with steel mesh
Power Source for Electronics,	

1700 Watt Inverter	220 Volts
Tie Down Points	8
Doors	3 (2 front, 1 rear)
Weight of Vehicle	4900 Kg GVW
Turret Mounting Brackets for Weapon	Generic brackets that can be adapted in country (Locally to fit the LMG for the proposed armoured personnel carrier).

Optional

- Camera Back view system
- Winch
- Jammer
- Remote Control Gun with 360° rotation (12.7mm / 7.62 MG)

Front Heavy Duty RAM Style Bumper and Heavy Duty rear bumper with rear steps to assist through rear doors

Armoured Security Vehicle Mohafiz-V



Characteristics

General:

Length	5.4 M (Without Spare Wheel)
Width	2.2 M
Height	2.1 M (Without Turret), 2.6 M (With Turret)
Curb Weight	4.8 Ton
Combat Weight	5.6 Ton
Crew Cap	8

Performance:

Speed on Metalled Road	12 Km / H
Clearance	220 MM
Drive System	4x4 (Part Time)
Minimum Turning Radius	7.2 M
Break System	Upgraded



HEAVY INDUSTRIES TAXILA



Power Pack

Engine	202 HP
Engine Type	Diesel, 4.5L, 8 Cylinders, 4 Stroke, Water Cooled
Transmission	5 Speed Manual and 1 Reverse

Protection

Armour	Ballistic Steel
Level	B6 As per EN 1522/1523

Technology

V8 Turbo Diesel with Intercooler
 Toyota 5 speed Manual Transmission
 4x2/ 4x4 High / 4x4 Low
 CEN/EN 1063
 Front/Rear upgraded Suspension
 Run Flat Tyres
 Front/Rear Upgraded Disc Brakes
 Air Conditioner/Heater
 Turret

Protection

- Heavy Duty Aluminum Alloy Rims
- Heavy Duty Run Flats
- Firing Ports and Sight Glasses
- Rifle Racks
- Public Address System
- Search Light
- Exhaust Fan
- Roof Ventilators
- Seat Belts/Air Bags
- Tool Set
- First Aid Box
- Protection B6 - Standard (EN-1063)

Ballistic/IED Protection - Military Vehicles



Characteristics General:

Specifications	Single Cabin	Double Cabin
Length	5.3 M	5.32 M
Width	1.8 M	1.8 M
Height	23 M	2.3 M
Curb Weight	3500 KG	3600 KG
Combat Weight	4200 KG	4320 KG
Payload	720 KG	720 KG
Crew Capacity	2+6	2+4
Engine Horsepower (with Installation of Power Enhancement Kit)	220 HP	220 HP
Transmission	6 Speed Manual	6 Speed Manual

Performance:

Gradability	60% MIN
Side Slope	30%
Fording Depth	0.7M
Approach Angle	40"
Departure Angle	45"

Protection

Armour	B6 Level Per CEN 1522, 1523 & 1069
Blast Protection	Protected Against IED Blast

Upgrades

Upgrades	<ul style="list-style-type: none"> • Brakes • Suspension • Clutch • Run Flat Inserts • Power Enhancement Kit
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Firing Port	Available
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HEAVY INDUSTRIES TAXILA



Discreetly Armoured Commercial Vehicles (B6 Level Protection)



HIT offers high-end, quality discreet bulletproof protection for commercial vehicles. We turn regular commercial vehicles into extraordinary bulletproof machines. Our ballistic steel, ballistic glass and blast steel are certified internationally as well as by Inspectorate of Armament, GHQ.

With state of the art equipment, validated and approved manufacturing processes operated by highly skilled and qualified manpower, nothing is left to chance.

Main feature of bullet proofing are as under:

- All around Cabin Protection including Bullet Proof Glasses (B6 and B7 level)
- Run Flat Tyres
- Upgraded Brakes
- Upgraded Suspension
- Floor Protection against 2 x DMI 51 Grenade
- Installation of Engine Performance Enhancement kit

Bullet Proof Jacket NIJ Level III (+) / PK Level III



Characteristics Design Features

Protected Area

Vest opening

Casualty drag handles

Protection plates

Adjustable features

Ammunition Pockets

Physical Properties

Level of Protection

Outer Cover

Maximum Weight

Blast trauma protection

Excellent stopping power

with multi hit angle shot

benefit

Hard Armour Plates

Protection Level

Shock absorbent

Weight per plate

Size / Shape

Outer cover

Protection level

Front, Back, Neck and
Shoulders

Both sides & 1 x shoulder
using Velcro

Available upon request

Front & Rear

Waist & Shoulder

2 front pockets (can be
customized) Shoulder

padding for carrying guns

Flexible & Easy to use

Withstands rough handling

NIJ Standard 0101.04 Level III
/ Pk Std Level III

High Tenacity Fabric (1000-D)
Maximum 6.6 kgs

NIJ-III / Pk Std Level III (In
conjunction with Level IIIA
soft armor).

Edge protection provided
Upto 1.7 Kg (Maximum)
250 x 300 mm (minimum)
single curvature

Laminated with suitable
water proof fabric

NIJ-III (6 x bullets of

7.62x51mm fired from 15m)
Pk Std Level III (9 x bullets
fired from 15m)

- (3 x rounds of 7.62 x 51
mm -M80 Ball)

- (3 x rounds of 7.62 x 39
mm -AK-47)

- (3 x rounds of 5.56 x 45
mm -SS-109)





Soft Armour

Material	HPPE (High Performance Polyethylene) / Aramid Fabric
Construction	Multiple layers of suitable anti-ballistic material
Protection Level	NIJ-III A 6 rounds of 9 x19 mm MP-5 bullet fired from 5m Pk Std Level III A 6 rounds of 7.62 x 25 mm TT Pistol bullet fired from 5m

Operational Life

Soft Armour 3 years (Daily use)
Hard Armour 5 years (Daily Use)
Ballistic protection of both Hard & Soft armor must be re-validated every year after this period through ballistic testing to ensure optimal protection.

Trauma pack

Material	Suitable thickness of closed cell foam
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Accessories

Carrying Bags

Bullet Proof Jacket (BPJ) NIJ Level IV



Characteristics Design Features

Protected Area	Back & Front Neck Groin (optional)
Vest Opening	Front both sides Shoulders using Velcro
Removable Features	Collar for neck Groin
Provision for Protection Plates	Front Rear
Adjustable waist and Shoulders	Yes
Ballistic insert	Composite Ballistic Material with Anti Trauma protection
Flexible & Easy to use	
Size	Small, Medium, Large, X-large
Total Weight	7.5 to 8 Kg

Physical Properties

Weave, Weight, Destiny, Shrinkage, Colour and Colour	As per International Standards
Fastness	
Ballistic Insert	Multi layered Ballistic material
Shell fabric weight	1.0 - 1.5 Kg (depending upon size)
Protection plate (HAP)	ICW (300x250x20)mm, 2.5 KG
Protection level	NIJ IV

Outer cover
Chemically inert, water resistant, weave, colour fastened, shrink proof, floatable.
Provide maximum protection against full metal jacket
Blast trauma protection
Minimize blast trauma injuries
Excellent stopping power with multi hit angle shot benefit
Nylon (Cordura 1000 D)

Accessories

- Max Protection against steel jackets rounds
- Blunt Trauma protection
- Minimize Blunt Trauma injury
- Excellent stopping power, with multi angle shot benefits
- Carrying Bags

Bullet Proof Vest Helmet (BPV) NIJ IIIA



Characteristics Design

Protected Area	Front and Back
Vest opening	Both sides
Adjustable features	Waist only with optional shoulder adjustment
Flexible & Easy to use	
Withstands rough handling	

Physical Properties

Level of Protection	NIJ Standard 0101.04 Level IIIA / Pk Std Level IIIA
Outer Cover	High Tenacity Fabric
Maximum Weight	Maximum 3.2 kgs
Blast trauma protection	
Excellent stopping power with multi hit angle shot benefit	





Soft Armour

Material	HPPE (High Performance Polyethylene) / Aramid Fabric
Construction	Multiple layers of suitable anti-ballistic material
Protection Level	NIJ-III A 6 rounds of 9 x19 mm MP-5 bullet fired from 5m Pk Std Level III A 6 rounds of 7.62 x 25 mm TT Pistol bullet fired from 5m

Shelf Life

Soft Armour	5 Years
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Operational Life

Soft Armour 3 years (Daily use) Ballistic protection of Soft armor must be re-validated every year after this period through ballistic testing to ensure optimal protection.

Trauma Pack

Material	Suitable thickness of closed cell foam
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Accessories

Carrying Bags

Ballistic Helmet NIJ Type II



Characteristics Ballistic Protection

The PASGT Helmet is available to meet NIJ Level II and IIIA as well as bespoke designs to meet specific client needs.

Fragmentation Protection

Protection against fragments from V50 450m/sec V50 650m/sec according to STANAG 2920 (17gr FSP) and US MIL STD 662F.

Sizes

Small, Medium, Large and Extra Large (50-66cm head circumference)

Colours

Standard colours are black, navy blue, olive drab.

Accessories

Accessories include ballistic visors, anti fragmentation visors and anti riot visors. Neck protectors. Various harness options and pads systems, helmet covers, carrying bags and badges or insignia.

Armoured Guard Post Bunker (B6 / B7 Level Protection)

Pentagonal shaped Armoured Guard Post has been manufactured in order to provide immunity to the guards against 9mm, 38 Bore, 7.62mm NATO BALL and AP round (B-6 & B-7 level) at 10 m distance. Sliding firing ports and specially designed tapered pentagonal shaped cabin protects the guard so that they can fire from inside even at the closest distance. Bullet proof glasses have been installed all around so that the guards can fire in both sitting and standing position. It is fitted with collapsible seats that can provide survivability all around. The post is provided with reversible air-conditioner which can even operate at 55°C. It can be lifted to any place easily. It is provided with search lights and revolving light. It is ideally suited for use at vulnerable localities and important Government buildings like airports, defence installations, banks, communications centres, embassies, diplomatic enclosures, private bungalows and in areas with restricted field of view etc. Due to modular nature, it can be suitably placed on top of a roof as well. HIT can also manufacture custom designed Guard Posts.



It is provided with reversible air-conditioner which can even operate at 55°C. It can be lifted to any place easily. It is provided with search lights and revolving light. It is ideally suited for use at vulnerable localities and important Government buildings like airports, defence installations, banks, communications centres, embassies, diplomatic enclosures, private bungalows and in areas with restricted field of view etc. Due to modular nature, it can be suitably placed on top of a roof as well. HIT can also manufacture custom designed Guard Posts.

Characteristics

	BUNKER ONE MAN	BUNKER TWO MEN
Length (With AC)	1.46 M approx	2.84 M approx
Length (Without AC)		2.38 M approx
Width	1.47 M approx	2.38 M approx
Height without turret	2.13 M approx	2.20 M approx
Height with turret	2.70 M approx	2.77 M approx
Ballistic Protection	B6 / B7	B6 / B7
Protection against hand grenade	Full	Full
Field of view/Firing Ports	9x view windows all around through bullet proof glasses without turret and 12 with turret	9x view windows all around through bullet proof glasses without turret and 12 with turret
Weight	1900 - 2400 Kgs	2150-2650 Kgs

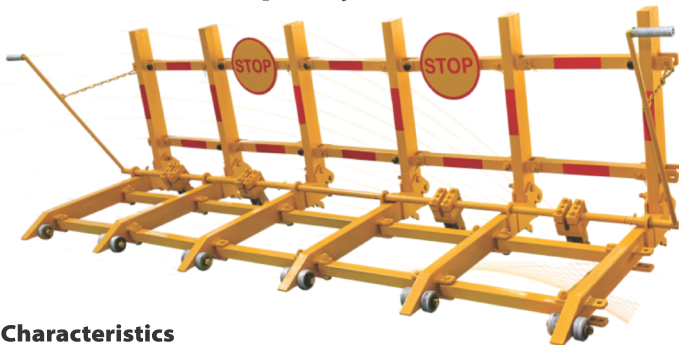




Special Features

	BUNKER ONE MAN	BUNKER TWO MEN
Rifle Rack	1	2
Seating	2 x seats without turrets and 1 x seats with turret	4 x seats without turrets and 2 x seats with turret
Turret seat	1 x sliding turret seat	1 x sliding turret seat
Inside lights	Provided	2
Siren	1	1
Telephone socket	1	1
Air Conditioner with	Available	Available
Ballistic protection		

Modular Vehicle Barrier (2.5 Ton Truck Capacity)



Characteristics

Length	3 M (10 FT)
Width	1 M (3.25 FT)
Height	0.9 M (3 FT)
Weight	250 KG (Approx)
Assy Time	20 Mins (By 2xPers)
No of Modullar Assy	6
Unit Weight of Modular Assy	40 KG
Dimensions of Modular Assy (LXWXH)	44 X 6.5 X 10 Inches
Paint	Yellow (As per User Demand) With Light Reflectors

Once Assembled, Can Be Re-Located Easily By Single Person
Collision / Impact with Make Veh (CAR, JEEP, TRUCK) IMMOBILIZE

Portable Tyre Killer



Compact Dimensions

Length	0.6 M (2 FT)
Width	0.5 M (1.6 FT)
Height	0.07 M (2.75")

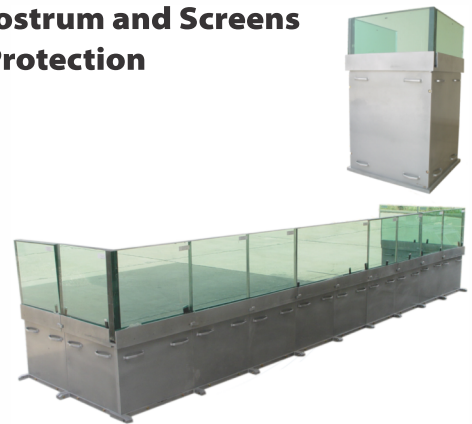
Stretch Dimensions

Length	4.8 M (15.8 FT)
Width	0.15 M (0.5 FT)
Height	0.07 M (2.75")
Deployment Time	01 MIN
Weight	28 KG (APPROX)
Paint	Yellow (As per User Demand)

Impact with Will be Burst Types of Vehicle, Which will Ultimately Make Vehicle Immobilize. Complete Tyre Killer Can be Carried by 1 X Person

Bullet Proof Rostrum and Screens B6 / B7 Level Protection

Bullet Proof Rostrum and screens have been manufactured by Heavy Industries Taxila. It provides protection to the speakers and VIPs at point blank distance. It has bullet proof glass at the front as well as on the sides. The rostrum and screens have been designed in such a way that it can easily be carried along in modular form and can be installed or reinstalled. It is also fitted with spotlight, rack for keeping documents and a glass holder.



Standard Characteristics

Height without glass	4ft
Height with glass	6ft
Ballistic protection	B6 / B7 Level Protection
Protection against hand grenade	Full
Field of view	All around through Large size bullet proof glass

Type
Color scheme
As per user requirement

Additional Features

Rack for placing documents
Glass Holder
Spot light

Customized Options

Bullet proof rostrum and screen can be manufactured in accordance with user requirements
Telephone / intercom
Alarm system / Hooter
Any other facility required by the Customer



Agri- Mechanization

HIT is pursuing indigenous development of Central Pivot Irrigation System, Laser Land Leveler, Multi-Purpose Seeder & Agri Drones to support Corporate Agriculture Farming' in Pakistan.

Central Pivot Irrigation System

- Economical with little labour and long life 20-30 years
- Highly Water Efficient upto 85 to 95%
- Useful for Pesticide and Fertilizer Applications by easily adapted to chemigation or fertigation
- Less Tillage reduces water runoff, soil erosion and compaction
- Apply irrigation in a uniform manner
- Conserve energy
- Programmable to irrigate on a specific schedule



Agri Drones

- Crop spraying, survey, monitoring and management
- Completely programmable
- AI based monitoring system
- 50 Liter pesticide / spray tank



Laser Land Leveler

- Efficient towing design
- Better balance of blade bucket
- Soil roll-over capability
- User friendly design
- Uniform surface for planting
- Indigenous manufacturing of parts



Multi-Purpose Seeder

- For dispensing seeds and fertilizer both
- 12 rows seeding capability
- Stepless transmission
- Stainless steel seed box
- Works with >50HP tractors
- Chain and sprocket driven
- Indigenous manufacturing of parts



