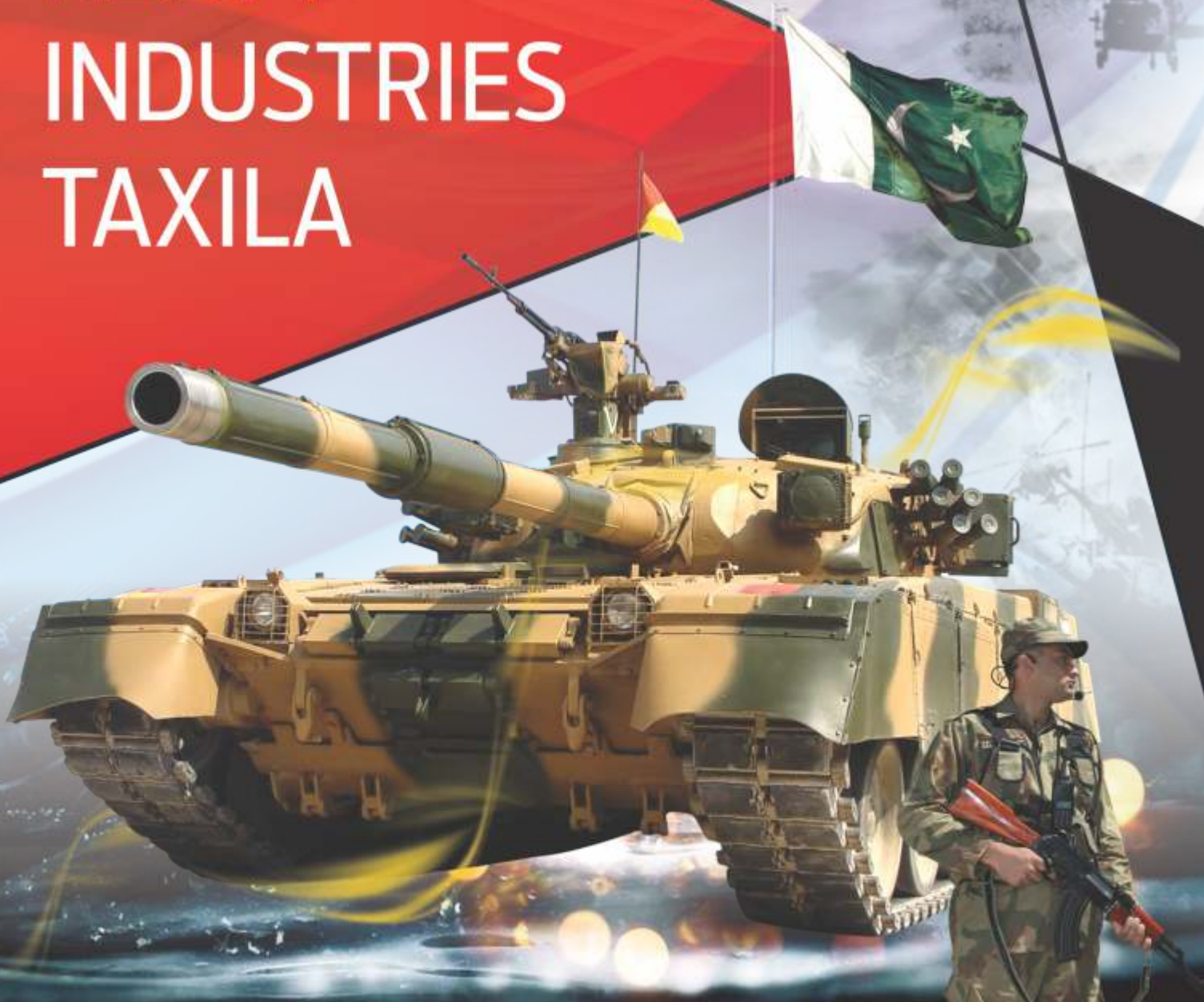




Strength Through Self Reliance

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

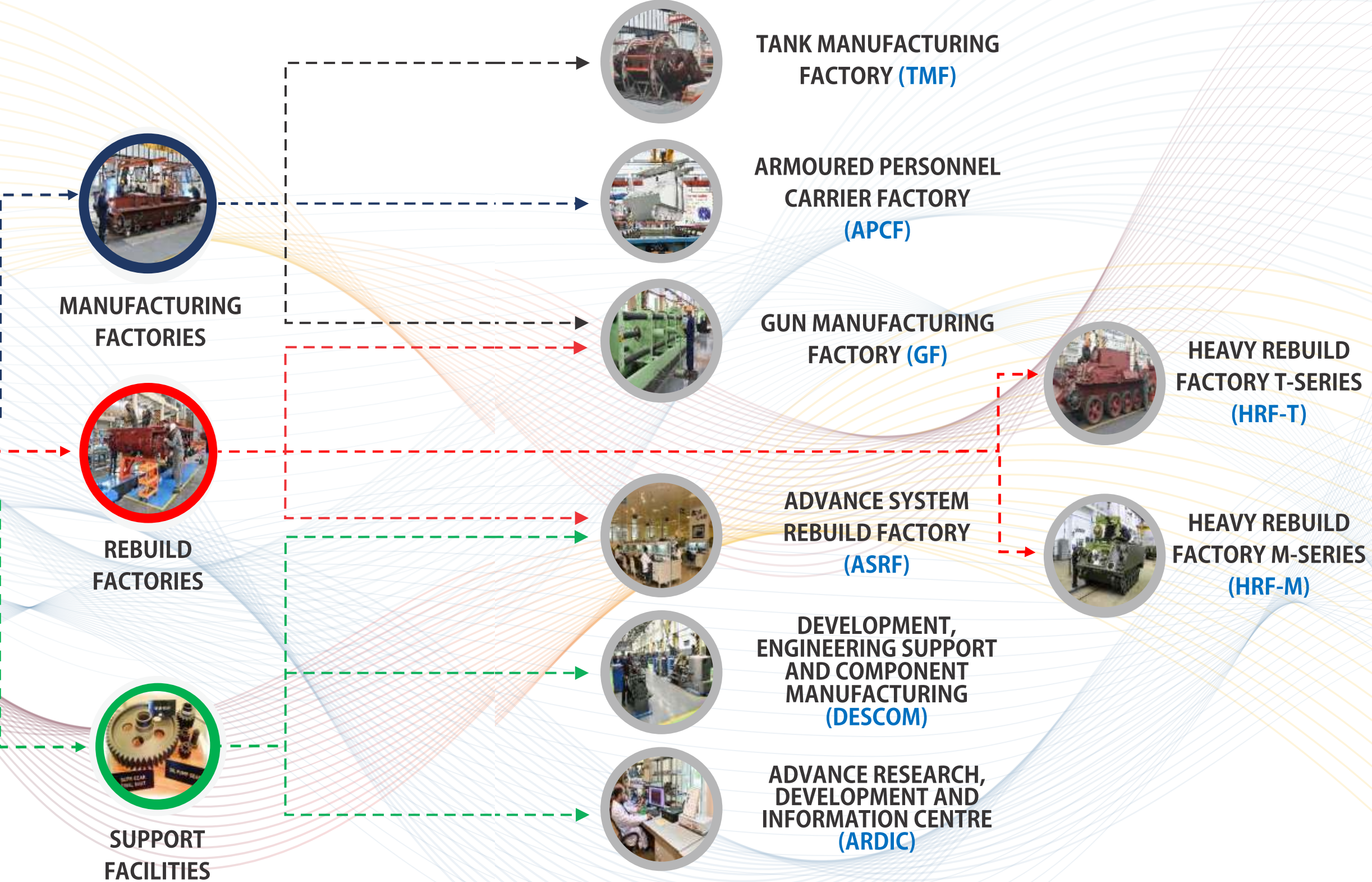
Our Mission

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



Tank Manufacturing Factory (TMF)

Established in 1992 for manufacturing of new Tanks. Manufactured Tanks T69IIMP, T85IAP, 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)



Hull Fabrication Shop



Robotic Arm Welding Station



Stringent Quality Control



Robotic Arm Welding Station for Hull



Hull Fabrication Shop



Course Turret Machining



Manufacturing to Perfection



Hull Fabrication Shop



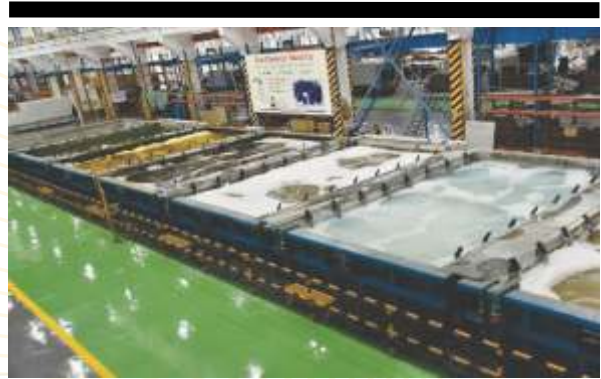
Welding of Armoured Plates - Tank Hull



Precision Machining (7 Axis CNC)

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.



Surface Treatment Facility



Hull Welding Facility



Assembly Line



Gantry Milling Machine



Production Line – Command Vehicle SAKB



B6 / IED Protection Solution



Production Line – ASV Protector



5 Axis CNC Water Jet Cutting Facility



Laser Precision Bending



Production Line – Discrete Armouring Toyota Hilux

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.



Chrome Plating Facility



Industrial Material Handling Facilities



Turning Operation



Cradle Machining



Barrel Manufacturing Shop



Barrel Straightening



Inspection and Quality Control



Hydraulic Autofrettage



Honing Operation



Mechanical Autofrettage

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 ARV W653.



Assembly Shop - Tank Al Khalid



Assembly of Tank



Assembly Shop - Tank T80UD



Industrial Welding



Assembly Shop - Tank T85UG & ARVs



Assembly of Tank T85UG



Hull Assembly Shop



Hull Fabrication Shop



Rebuild of Tank T85UG



Turret Assembly Shop - Tank T85UG / ARVs

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).



Specialized Machining Facility



Tanks/ APCs Parts Manufacturing



General Machining Facility



Gun Breech Block Machining



Tools Manufacturing Shop



CNC Milling Facilities



Fabrication— Engine Intake Valve



Bullet Proof Jacket Manufacturing



CNC Lathe Facilities



EDM Wire Cut Facility

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.



Tank Haider Simulation Lab



Fire Control System Lab



Manufacturing / Refurbishment of Electric Harnesses



Inspection and Testing Facilities



Tank Al Khalid Simulation Lab

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



PCB Design and Fabrication Lab



Artillery Gun Systems Design and Simulation Lab



Electrical Systems Design and Simulation Lab



Tank Systems Design and Simulation Lab

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 |

Running Gear

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

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% |

Ammunition

| | |
|-------------------------|--|
| Main Gun Ammunition | APFSDS, HE, HEAT, Guided / Gun-launched Missile. |
| On board number of ammo | 38 rounds |

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

Misc

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

Power Pack

| | |
|-------------------|---|
| Type | Four-stroke, Turbocharged, Intercooled, Electronically Controlled Diesel Engine |
| Rated Power | 1200hp |
| Transmission type | Hydro-Mechanical, Automatic |
| Steering | Dynamic-static hydraulic combined steering |

Suspension System

| | |
|-----------|-------------------------------|
| Type | Torsion Bars, Shock Absorbers |
| Bump Stop | Hydraulic Buffer |

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

FCS / GCS

| | |
|---------------------------|--|
| Gunner's Day sight Type | Independent bi-axis stabilized with independent FOV stabilization with HMSS |
| FOV / Magnification | Wide FOV - 100 / 6x Narrow FOV - 60 / 10x |
| Gunner's Night sight type | Thermal Imager (576x4) |
| Night Sight Range | Target detection - 12.2km minimum Target recognition - 4.5km minimum Target identification - 2.4km minimum |
| Commander Sight | Views of Gunner's day sight and TI sight are available with Commander through Display / Control Terminal |
| LRF | 60m to 2500m |

Tank Al-Khalid-I



Pride of Pakistan

Characteristics

General

| | |
|-----------------------|------------------------|
| Combat Weight | 46-48 Ton |
| Crew | 3 |
| Cruising range | 430 Km |
| Power to weight Ratio | 26:1 |
| MMP | ~260 KN/M ² |

PowerPack (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 Control | 1000 Rounds |
| Co-Axial MG | 4000 Rounds |
| Grenades | 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, 2 nd 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 Computer |
| 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 Unity
- FOV 38±2°
- Rotation Left & Right each 35°
- Resolution 40LP/mm
- Automatic Brightness Control Yes
- Effective Range 250m
- MRS Facility Available 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 |

Additional Modifications

Existing external fuel tanks removed and replaced with internal fuel tanks as configured for APC M113A1.

Ramp door removed and replaced with a rear door for mounting / dismounting of personnel.

Options for ramp door with reinforced mechanical spring system also available.

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 |

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

Final drive

Type: Gear

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 |

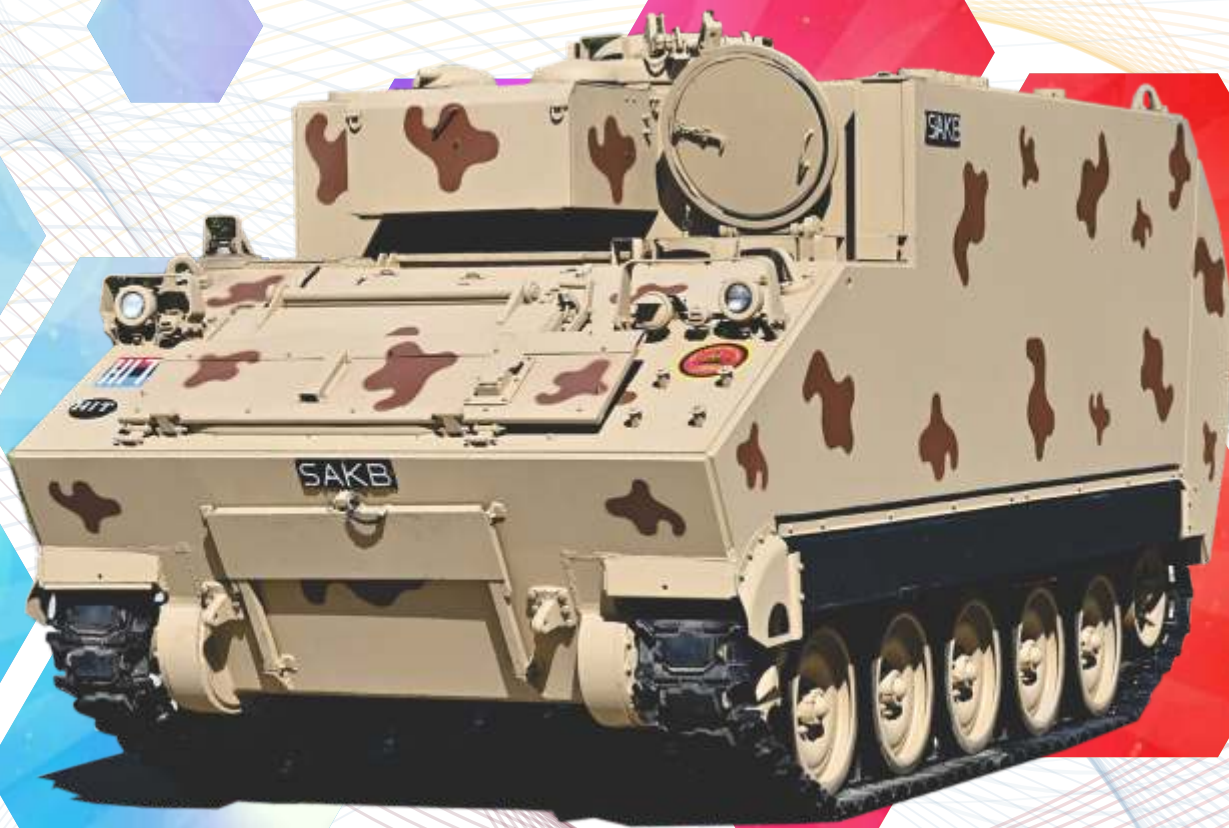
Power Pack

| | |
|------------------|-----------|
| Engine | 265 HP |
| Transmission | Automatic |
| Pivot Break Type | Disc |

Protection

| | |
|--------|----------------|
| Armour | Aluminum Alloy |
|--------|----------------|

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 |
|------|------|

Electric System

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

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 C-1
- 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

Weight of forging blank
Weight of finished blank
No of Operations

Breech Ring

PCrNi3MoVA
1400 kg
572.5kg
79

Breech Block

PCrNi3MoV
200 kg
63.17 kg
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 Dragoon



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

| | | |
|----------------------|---|--|
| Ballistic Protection | Stanag Level III (with Add On Armr) | Options <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 |
|-------------------------|----------|----------|

Armoured Security Vehicle Protector (B7 Level Protection)



Bullet Proof Glass



Improved Suspension



Run Flat System



Composite Armoured Panel

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 |
| 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



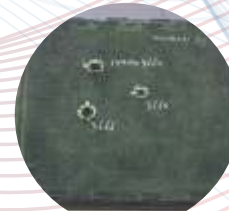
Bullet Proof Glass



Improved Suspension



Run Flat System



Ballistic Steel Hull

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 |

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

Features

- 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 |
|----------|---|

| | |
|-------------|-----------|
| Firing Port | Available |
|-------------|-----------|

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 features 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 | Front, Back, Neck and Shoulders |
| Vest opening | Both sides & 1 x shoulder using Velcro |
| Casualty drag handles | Available upon request |
| Protection plates | Front & Rear |
| Adjustable features | Waist & Shoulder |
| Ammunition Pockets | 2 front pockets (can be customized) |
| | Shoulder padding for carrying guns |
| | Flexible & Easy to use |
| | Withstands rough handling |

Physical Properties

| | |
|--|---|
| Level of Protection | NIJ Standard 0101.04 Level III / Pk Std Level III |
| Outer Cover | High Tenacity Fabric (1000-D) |
| Maximum Weight | Maximum 6.6 kgs |
| Blast trauma protection | |
| Excellent stopping power with multi hit angle shot benefit | |

Hard Armour Plates

| | |
|------------------|--|
| Protection Level | NIJ-III / Pk Std Level III (In conjunction with Level IIIA soft armor). |
| Shock absorbent | Edge protection provided |
| Weight per plate | Upto 1.7 Kg (Maximum) |
| Size / Shape | 250 x 300 mm (minimum) single curvature |
| Outer cover | Laminated with suitable water proof fabric |
| Protection level | NIJ-III (6 x bullets of 7.62x51mm fired from 15m) |
| | Pk Std Level III (9 x bullets fired from 15m) |
| | <ul style="list-style-type: none"> ▪ (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 |
|----------|--|

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 IIIA 6 rounds of 7.62 x 25 mm TT Pistol bullet fired from 5m |

Shelf Life

Soft Armour 5 Years

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

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.

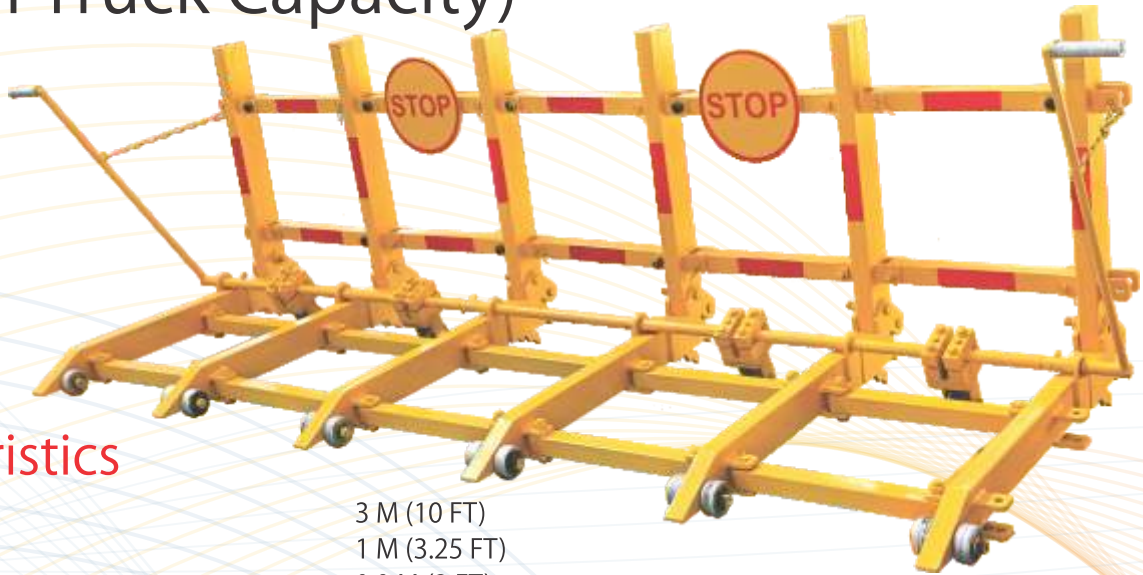
Characteristics

| | 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

| | | |
|---|---|---|
| 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 Ballistic protection | Available | Available |

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 | Modular |
| 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



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