



HEAVY INDUSTRIES TAXILA

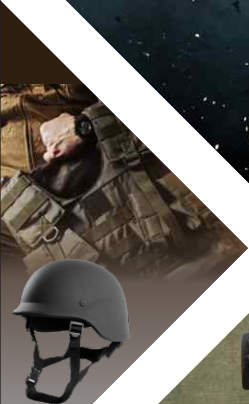
Strength Through Self Reliance

PRODUCT PROFILE



MARGALLA HEAVY INDUSTRIES LIMITED

(A wholly owned subsidiary of Heavy Industries Taxila)



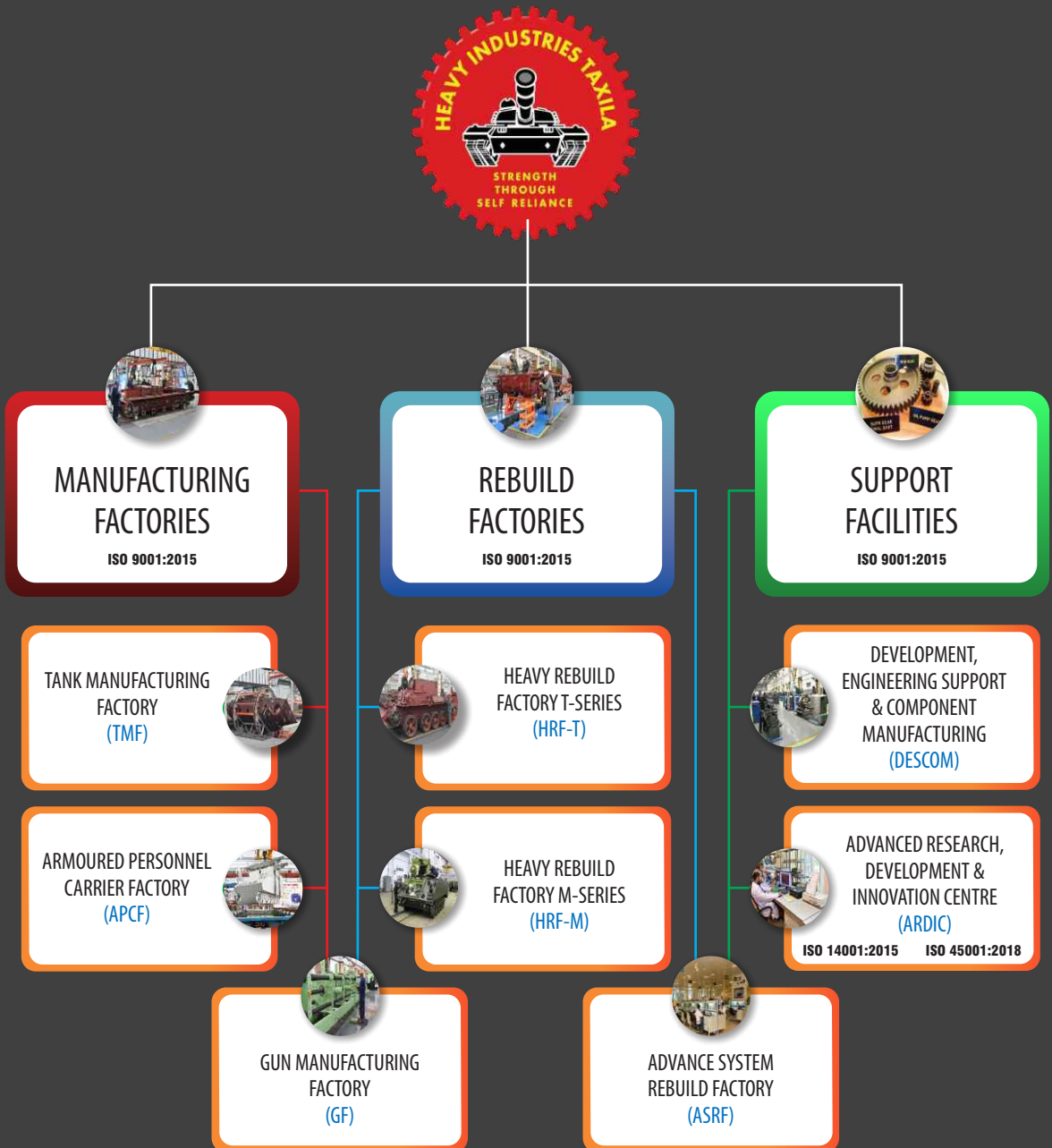


MISSION

Manufacturing, Rebuild, Upgrade and Conduct R&D of Armoured Vehicles with emphasis on self reliance through indigenization and utilize HIT's commercial potential to meet requirements of civil sector and friendly countries

**UNWAVERING COMMITMENT TO
NATIONAL SECURITY SINCE 1971**

HIT Production Facilities



Margalla Heavy Industries Limited (MHIL) was established in **September 2020** as the commercial arm of Heavy Industries Taxila (HIT), Pakistan's premier defense production complex. While HIT provides the infrastructure, manufacturing plants, advanced machinery, and a highly skilled workforce, MHIL serves as the marketing and commercial face, bridging HIT's extensive capabilities with global markets.

Tank Haider

DEFENSE
EQUIPMENT
DIVISION



CHARACTERISTICS

General Specification

Combat weight	53 ± 1 ton
Crew	3
Engine power	1200 hp
Power-to-weight ratio	22.64 hp / ton
Mean pressure to ground of track	2.85 kg/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
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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	2.7 m
Vertical obstacle negotiation	0.85 m
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 can be remotely controlled to acquire
AAMG Sighting System	track a target, measure and set the range automatically

Protection

Armour protection	Composite armor
Secondary Protection	Semi Active Protection System (SAPS) integrated with countermeasures
NBC	Collective NBC Protection with Radiation detector
Fire Extinguishing and Explosion Suppression	Automatic; in engine fighting, and driver compartments

Power Pack

Type	Four-stroke, Turbocharged, Intercooled, Electronically Controlled Diesel Engine
Rated Power	1200 hp
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	125mm smooth bore chrome plated
Co-axial MG	7.62mm
AAMG	12.7 mm RCWS with Auto-Tracking

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 / 6 x Narrow FOV - 60 / 10 x
Gunner's Night sight type	Thermal Imager (576 x 4)
Night Sight Range	Detection: ≥ 12.2 km Recognition: ≥ 4.0 km Identification: ≥ 2.4 km
Commander Sight	View from Gunner's day and TI sights via Display/Control Terminal

Misc

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



Tank Al-Khalid 1



CHARACTERISTICS

General

Combat Weight	46-48 ton
Crew	3
Cruising range	400 km
Power to weight Ratio	18.3 kw/t
MMP	~270 kn/m ²

Power Pack (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

Performance

Max Speed	70 km/h
Acceleration	0-32 kmph in 10~12 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	7.62 mm
AAMG	12.7 mm RCWS with Auto-Tracking
On board No of Ammo	48 rounds

Auto Loader

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

Commander Sight

Type	Panoramic Bi-Axis Stabilized, LRF, 2 nd Generation III, Hunter Killer Capability, Override Capability
Magnification	Dual 6x to 10x
Field of View	10° to 6°

Head Mirror Stabilized Gunner Sight (HMSS)

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

Auto Tracker

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

Misc

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

Additional Add Ons

Integrated Battle Field Management System



Tank Al-Zarrar



Upgrading of Tank T-55, T-59, T-69

The Al-Zarrar upgrade project was initiated to maximize the potential of tank T-55 / T-59 / T-69 through extensive R&D and prototype trails. After successful evaluations, series production commenced in January 2003. More than 480 tanks T-55, T-59 & T-69 have been upgraded to Al-Zarrar configuration by HIT

CHARACTERISTICS

General:

Combat weight	42.7 tons
Crew	4
Power to weight ratio	17.1 hp/ton
Engine horse power	730 hp Diesel Engine
Maximum speed	55 km/h
Cruising range	400 km (with spare barrels)
gradient	60%
Side slope	30°
Vertical obstacle	0.8 m
Fording	1.4 m

Running Gear

Track	Rubber
Support roller	3 each side
Shock absorber	Friction type (2 x each side)
Torsion bars	10
Buffer cylinder	4 (2 x each side)

Armaments

Main Gun	125 mm Smooth Bore
Projectiles	APFSDS, HEAT, HE
Co-axial MG	7.62 mm
AAMG	12.7 mm RCWS with Auto-Tracking
Loading system	Semi auto Loading/ Ramming System

FCS/GCS

- Gun stabilization
- Firing modes
- ISFCS/SFCS
- Muzzle reference system

Bi-Axis
S-S, S-M, M-S, M-M
Both
Available

Composition of Observation (Target Acquisition) System

a. Gunner Sight

Magnification	10 times
Angle of FOV	6° 30°
Range Finding	200~5000 m
Resolution in Azimuth	≤ 1.2 mrad
Resolution in Range	50 m

b. Thermal Imager Sight

2nd generation Thermal Imager	
System Control Panel	
Gunner Display Unit	
Commander Display Unit	
Automatic Brightness Control	yes
Installation kit	
DRI	6000m, 3500m, 1500m

Field of View

Wide	8° x 6°
Narrow	3.2° x 2.4°

c. Periscopes for Driver, Gunner & Commander

Periscopic, High performance & periscopes	
Rubber padded	
Magnification	Unity
FOV	38 ± 2°

Add-on Features

- Laser warning and vehicle obscuration system
- Remote controlled weapon system (12.7mm AAMG)
- Auto tracker system
- Driver observation system

ARMoured PERSONNEL CARRIER (APC)

TALHA-1



APC SAKB
(COMMAND VEHICLE)



APC AL-QASWA
(LOGISTIC VEHICLE)



AL-HADEED
(RECOVERY VEHICLE)

Characteristics

General

Combat Weight	12 ~ 14 ton
Curb Weight	10.5 ton
Pay Load	1.5 ~ 3.5 ton
Length	5,512 mm
Width	2,540 mm
Height	1,854 mm
Crew Capacity	13
Fuel Tank Capacity	360 Liters
Firing Ports	2 Each Side
Hull	Al Alloy, Monocoque

Powerpack

Engine	6.6 Liters, 4 Cycle, V8, Diesel (275-350 hp)
Transmission	Automatic, 4 Speed

Sub System / Accessories

Suspension Type	Torsion Bar
Steering	Differential or Pivot/Wheel
Pivot Brake Type	Disc
Alternator	100 Ah, 28 V DC
Batteries	2 x 12 V
Fire Extinguisher	CO ₂ in Engine & Crew Compartment
Armament	7.62 / 12.7 mm MG

Protection

Basic Level	B6
With Add on	Protection against 12.7 mm

Performance

Speed (Level Ground)	70 km/h
Turning Radius	Pivot to Infinite
Slope / Side Slope	60% / 30%



WHEELED ARMoured PERSONNEL CARRIER

FAARIS



12.7mm Open TURRET

30mm One Man TURRET

105mm TURRET

120mm MORTAR

Ambulance

Recovery

Characteristics

General

Combat Weight	25 ton
Curb Weight	17.5 ton
Pay Load	7.5 ton
Length	7,200 mm
Width	3,000 mm
Height	2,400 mm
Crew Capacity	11
Fuel Tanks Capacity	510 liters
Firing Ports	2
Hull	Monocoque

Power Pack

Engine	570 hp
Transmission	Automatic 7 + 1

Sub System / Accessories

Suspension Type	Hydro-pneumatic Independent Suspension
Steering	Axle I / II
Brake Type	Pneumatic Disc
Alternator	10 kW, 28 V

Batteries	2 × (24 V, 130 AH)
Fire Extinguisher	Automatic: Engine, Manual: Crew Compartment
Armament	7.62 mm / 12.7 mm

Protection

Ballistic	Basic: STANAG Level 1, With Add On: STANAG Level 4
Blast	STANAG Level 4
Mine Protection Seats	Yes

Performance

Speed (Level Ground)	110 km/h
Turning Radius (mm)	10,000
Slope / Side Slope	30° / 17°

Additional Features

Can Bus	Yes
Navigation System	Beidou+GPS



MINE - RESISTANT AMBUSH PROTECTED VEHICLE (MRAP)

HISAAR



Characteristics

General

Combat Weight	14 ton
Curb Weight	12 ton
Pay Load	2 ton
Length	6,000 mm
Width	2,660 mm
Height - Excluding Turret	2,530 mm
Crew Capacity	10
Fuel Tank Capacity	200 liters
Firing Ports	13
Hull	Monocoque

Powerpack

Engine	296 hp
Transmission	Automatic, 6 Speed

Sub System / Accessories

Suspension Type	Independent
Steering	Power Assisted by Hydraulic
Brake Type	ABS Disc

Alternator	200 A, 24 V
Batteries	2 × 24 V
Fire Extinguisher	Available
Armament	12.7 mm

Protection

Ballistic	Level 2, Up-gradable to Level 3
Blast	Level 3a/3b

Performance

Speed (Level Ground)	110 km/h
Turning Radius	7,900 mm
Slope / Side Slope	60% / 30%



ARMoured SECURITY VEHICLE (ASV) MOHAFIZ-V



Characteristics

General:

Length	5400mm (Without Spare Wheel)
Width	2200 mm
Height	2100 mm (Without Turret), 2600 mm (With Turret)
Curb Weight	4.8 Ton
Combat Weight	5.6 Ton
Crew Cap	8

Performance:

Speed on Metalled Road	120 km/h
Clearance	220 mm
Drive System	4x4 (Part Time)
Minimum Turning Radius	7200 mm
Break System	Upgraded

Power Pack

Engine	202 hp
Engine Type	Diesel, 4.5L / 2.8L, 8 Cylinders, 4 Stroke, Water Cooled
Transmission	5 Speed Manual and 1 Reverse

Protection

Armour Level	Ballistic Steel B6 As per EN 1522/1523
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Technology

V8 Turbo Diesel with Intercooler
Toyota 5 speed Manual Transmission
4x2/ 4x4 High / 4x4 Low
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
Tool Set
First Aid Box
Protection B6 - Standard (EN-1063)



ARMoured SECURITY VEHICLE (ASV) **PROTECTOR**



Armoured Security Vehicle Protector, design & manufactured at HIT is based on the commercial chassis using light weight composite armour.

Engine Type	Water cooled Turbo -Diesel, 8 cylinder, 150 kw (202 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); meet NATO / FINABEL speed and distance standard of 50 km at 50 km/h
Steering	Power Assisted
Exhaust Fan	1
Body Protection	B7 Level
Bullet Proof Glass	B7 Level
Firing Hatches	2
Rifle Racks	Vertical rack(s) for a total of 5 full stock of AK-47 rifles
Turret	Centered position, Manned turret with B-7 protection. Demountable seat; minimum 14" height with hatch cover; 360° rotation, 7.62mm RCWS (Optional)
Air Conditioner	Available (Optimum air conditioning will be assured)
Towing Hooks	Optional
Fire Extinguishers	2
First Aid Box	1
Public Address System	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)
Lights Protection	Head lights, rear brake lights, indicators and back lights protected with steel mesh
Doors	3 (2 front, 1 rear)
Weight of Vehicle	4900 Kg GVW



AIMS

(Advance Infantry Mortar System)



AIMS is designed to enhance precision, adaptability, and rapid response in modern combat. Mounted on 4x4 vehicles, it provides superior mobility with shoot-and-scoot capability, reducing vulnerability during operations. The system ensures high accuracy and reduced system wear through digital fire control and stabilization. It supports dual calibers (81mm and 120mm), allowing flexibility across mission needs, with rapid deployment and automated target alignment to reduce operator workload. Equipped with an integrated ammunition carrier, AIMS minimizes resupply dependence and enables prolonged engagement.

Characteristics

Multi-Caliber Support	Configurable for 81mm and 120mm calibers	Deployment Time	Position to direct fire: < 50 sec Re-aim: < 10 sec New Target: < 10 sec Withdrawal: < 25 sec
Firing Range	120mm Mortar: 6.5 km 81mm Mortar: 4.5 km	Traversal / Elevation	110° traversal 50° – 85° elevation
Ammunition Capacity	40 rounds (120 mm) 60 rounds (81 mm)	Platform	Vehicle-mounted setup for versatile deployment on any 4x4 vehicle - reinforced suspension
Ammunition Carrier	Integrated with system for rapid reloading	Payload	1500 kg
Physical Dimensions	Platform requires 7' x 2.5' (L x W) on vehicle bed (adjustable as per user requirements)	Digital FCS	Provides map visibility, reduces operator load, ensures precise targeting
System Weight	Less than 1300 kg (without ammunition)		

REMOTE CONTROLLED WEAPON SYSTEM (RCWS)

ZARB



**12.7mm
RCWS**



**7.62mm
RCWS**



**7.62mm RCWS
Mounted on
ASV Mohafiz-V**

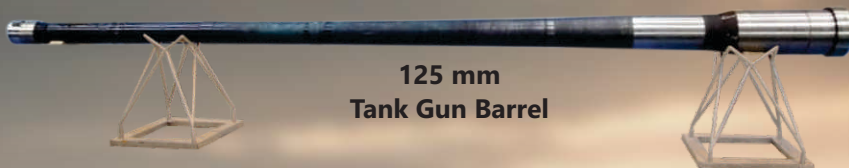
The RCWS family is engineered to provide precision firepower, superior safety, and versatility in modern battlefield operations. Configured for ground role missions, the systems can be integrated onto a wide range of military vehicles or operated from bunkers, offering border, perimeter, and asset protection. It delivers shoot-and-suppress capabilities while ensuring operator safety through remote control. Designed in-house, it ensures cost-effectiveness, rapid deployment, and accurate engagements in both offensive and defensive roles with calibers up to 12.7mm.

Characteristics

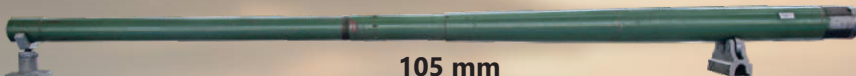
Caliber	12.7mm / 7.62mm / AGL	Sighting System	Electro-optical sight (customizable), Thermal imager (optional)
Ammunition Capacity	Customizable as per user requirement	Fire Control	Touch-screen enabled auto-laying for quick engagements
Rate of Fire	Up to 600 rounds/min (customizable)	Weight	ZARB LV - 100kg ZARB M - 200kg ZARB H - 400kg
Operational Envelope	360° traverse; -20° to +60° elevation	Integration	Compatible with all military vehicles and ground-based roles
Firing Modes	Single shot and automatic		
Loading	One-time manual loading and cocking		



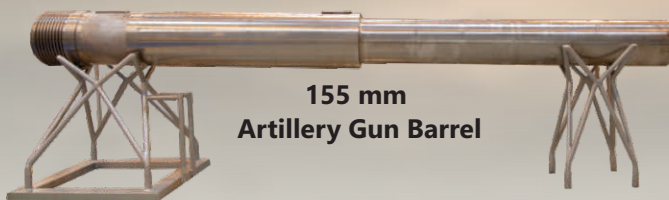
TANK & ARTILLERY GUN BARRELS



125 mm
Tank Gun Barrel



105 mm
Tank Gun Barrel



155 mm
Artillery Gun Barrel

Gun Systems

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

Gun Systems Parts

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 | • Safeguard | • Thermal Sleeve |
| • Recoil | • Cartridge Case Ejector | • Breech Ring |
| • Barrel | • Elevating Mechanism | • Breech Block |
| • Bore Evacuator | • Recoil & Wedge Contact | • Worm Wheel Casing & Box |
| • Cradle | | |

HIT also specialize in the manufacturing of following

- Steeped interrupted screw type breech blocks inclusive of the firing mechanism and breech ring for 155 mm artillery guns.



Cradle



Breech Block



Safeguard



Breech Ring



Elevating
Mechanism



Thermal
Sleeve



Recuperator

DISCREET ARMOURING

Ballistic / IED Protection - Military Vehicles



Characteristics

General:

Specifications	Single Cabin	Double Cabin
Length	5300 mm	5320 mm
Width	1800 mm	1800 mm
Height	2300 mm	2300 mm
Curb Weight	3500 kg	3700 kg
Combat Weight	4140 kg	4420 kg
Payload	640 kg	720 kg
Crew Capacity	2+6	5+4
Engine Horsepower		
(with Installation of Power Enhancement Kit)	220 hp	220 hp
Transmission	6 Speed Manual	6 Speed Manual

Protection

Armour	B6 Level Per CEN 1522, 1523 & 1063
Blast Protection	Protected Against IED Blast

Upgrades

Upgrades	Brakes Suspension Clutch Run Flat Inserts Power Enhancement Kit
Firing Port	Available

Performance:

Gradability	60%
Side Slope	30%
Fording Depth	0.7 m
Approach Angle	40°
Departure Angle	45°



DISCREET ARMOURING

Bulletproofing of Commercial Vehicles (B6 Level Protection)



MHIL 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



PERSONAL PROTECTIVE EQUIPMENTS (PPEs)

Bulletproof Jacket without side HAPs PK Level III & IIIA

Design Features

Protected Area
Vest opening
Casualty drag handles
Protection plates
Adjustable features
Ammunition Pockets

Front, Back, Neck, Shoulders and Groin pad
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



Physical Properties

Level of Protection
Outer Cover
Maximum Weight
Blast trauma protection
Size

Pk Std Level III, IIIA
High Tenacity Fabric (1000-D)
Small 7.4 kg, Medium 9.1 kg & Large 11.25 kg
Excellent stopping power with multi hit angle shot benefit
Small, Medium, Large

Hard Armour Plates

Protection Level
Shock absorbent
Weight per plate
Size / Shape

Pk Std Level III (In conjunction with Level IIIA soft armor_
Edge protection provided
Small 1.7 kg, Med 2.3 kg & Large 2 kg Max
Small 250 x 300 mm
Med 300 x 350 mm
Large 350 x 400 mm Max
Laminated with suitable water proof fabric
Pk Std Level III (9 x bullets fired from 15 m)
(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)

Outer cover
Protection level

Soft Armour

Material
Construction
Protection Level

HPPE (High Performance Polyethylene) / Aramid Fabric
Multiple layers of suitable material
Pk Std Level - IIIA 6 rounds of 7.62 x 25 mm TT Pistol bullet fired from 5 m



PERSONAL PROTECTIVE EQUIPMENTS (PPEs)

Bulletproof Vest (BPV) PK Level - IIIA



Design Features

Protected Area	Front, 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	Pk Std Level IIIA
Outer Cover	High Tenacity Fabric (1000-D)
Maximum Weight	3.2 kg Max
Blast trauma protection	Excellent stopping power with multi hit angle shot benefit
Size	Small, Medium, Large & X Large

Soft Armour

Material	HPPE (High Performance Polyethylene) / Aramid Fabric
Construction	Multi layers of suitable anti-ballistic material
Protection Level	Pk Std Level - IIIA 6 rounds of 7.62 x 25 mm TT Pistol bullet fired from 5 m
Size / Shape	Small 250 x 300 mm
	Med 300 x 350 mm
	Large 350 x 400 mm Max
Outer cover	Laminated with suitable water proof fabric
Protection level	Pk Std Level III (9 x bullets fired from 15 m)
	(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 material
Protection Level	Pk Std Level - IIIA 6 rounds of 7.63 x 25 mm TT Pistol bullet fired from 5 m

PERSONAL PROTECTIVE EQUIPMENTS (PPEs)

Bulletproof Helmet NIJ Level 0106.01



Ballistic Protection

The PASGT Helmet is available to meet NIJ Level 0106.01 as well as bespoke design to meet specific client needs.

Fragmentation Protection

Should be capable to provide min V50 (0" obliquity) protection with 64 gr RCC (vel: 1750 ft/sec) and 17 gr FSP (vel: 2200 ft/sec)

Sizes

The helmet should be of three sizes i.e. small, medium and large, with adjustable chin straps to suit head sizes as under, (these sizes are for inner fittings of helmets):-

Small	54.7cm and below
Medium	54.8cm to 57.5cm
Large	57.7cm and above

Colours

Standard colours - black, navy blue & olive drab

Maximum Weight

1.450 kg Max

Material

Aramid, Kevlar or composite system of high strength textile

Construction

Multiple layers of suitable anti - ballistic material

Protection Level

Ballistic testing will be carried out as per NIJ 0106.01.

Following weapon / ammunition will be used:

- Weapon SMG MP5A2/A3
- Ammunition 9 x 19 mm Mk-2Z
- Firing Distance 5 meters

Anti-Riot Kits



Design Features

- Helmet with visor Impact-resistant, anti-fog, gas mask compatible
- Body armor Shock-absorbing, chest & abdomen protection
- Arm & leg guards Hinged, hard-shell with padding for mobility + protection
- Groin protector Optional, detachable
- Gloves Cut-resistant, reinforced knuckles, strong grip
- Boots Reinforced toes/ankles, slip-resistant, flame/chemical resistant
- Shield Transparent, shatterproof, lightweight, fire-resistant
- Extras Modular, flame-resistant, ventilated padding, reflective markings

Physical Properties

- High impact resistance Protects against stones, sticks, and blunt objects
- Lightweight construction Allows mobility during long operations
- Shock absorption Foam lining reduces trauma from strikes
- Flame resistance Withstands fire or Molotov cocktails
- Chemical resistance Compatible with gas masks, some parts resist irritants
- Transparency Clear polycarbonate for visibility
- Shatterproof Visor and shield designed not to break into sharp fragments
- Durability Withstands repeated impacts without losing function
- Ergonomic flexibility Segmented plates and hinged joints for movement
- Weather resistance Usable in rain, heat, or humidity



COMMERCIAL PRODUCTS

Armoured Guard Post Aahan One & Two men



Armoured Guard Post (AGP) is manufactured to provide protection against 7.62mm NATO Ball (B6) & AP bullet (B7). Firing ports are provided on each side of the AGP in order to engage the targets in both sitting and standing position with view ports placed above the firing position. An optional 360 rotation turret can be provided with firing and view ports which can be mounted with 7.62mm machine gun. In order to provide comfort to the personnel on duty, air conditioning / heating system is made part of AGP. It is ideally suited for use at vulnerable localities and important government buildings like airports, defence installations, banks, communications centers, embassies, diplomatic enclosures and private bungalows etc. We can also manufacture custom designed Armoured Guard Posts.

Characteristics

Spec	One man	One men
Length x width x ht	57 x 58 x 85 inch	85 x 59 x 85 inch
Wt	1200 / 2600 kg	2000 / 3500 kg
Rifle rack	1	2
PA sys	Aval	Aval
AC sys	Aval	Aval
Seating capacity	1 x foldable seat	2 x foldable seats
Adjustable Platform	Aval	Aval
Table	1 x foldable	2 x foldable
Viewports (sides + turret)	8+3	12 + 3
Firing Ports (sides + turret)	8+1	12 + 1

COMMERCIAL PRODUCTS

Modular Vehicle Barrier (2.5 Ton Truck Blocking 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 min
No of Modular Assy	6
Unit Weight of Modular Assy	40 kg
Dimensions of Modular Assy (L x W x H)	44 x 6.5 x 10 inches
Paint	Yellow (as per user requirements) with light reflectors

Once assembled, can be re-located easily by single person
Collision / impact with make vehicle (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 inches)

Stretched Dimensions

Length	4.8 m (15.8 ft)
Width	0.15 m (0.5 ft)
Height	0.07 m (2.75 inches)
Deployment Time	01 min
Weight	28 kg (approx)
Paint	Yellow (as per user requirements)
Impact will burst tyres of vehicles, which will ultimately make vehicle immobilize. Complete tyre killer can be carried by 1 x person	





AGRI-MECHANIZATION

Central Pivot Irrigation System (CPIS)

MG 1001 LP
Low Profile
8ft height

MG 1001 LP
Standard Profile
12ft height

MG 3001 HP
High Profile
15ft height

Configuration	Acre	Hectares
1: P+0+4*198.9	50	20
2: P+0+4*198(6")+2*180(8")	100	40
3: P+0+1*180(6")+7*180(8")	150	60
4: P+0+1*198(6")+8*180(8")	200	80
5: P+0+1*217(6")+9*180(8")	250	101

Advantage

- Water Efficiency
- Labour & Time Saving
- Maximizing Crop Yield
- Fertigation & Chemigation



Pivot irrigation system can increase in yield



CORN HARVEST



POTATO HARVEST



COTTON HARVEST



WHEAT HARVEST



Laser Land Leveler

Structure Type	- Traction type
Dimension	- 2650 x 1600 x 1320mm
Hitching	- PTO
Matched Power	- 65 hp
Control mode	- Laser control
Levelling shovel	- Straight shovel
Tyre size	- 23 x 8.50/12
Weight	- 900 kg



Super Seeder

Matched power	- 65 hp (48.47 KW)
Dimensions	- 1600 x 2300 x 1400mm
Weight	- 1012 kg
Working width	- 200 cm
Working rows	- 12
Seeds/fertilizer tank capacity	- 60 kg
Seeds / dispatching qty	- 12



Agri Drones

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



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



OUR SERVICES



Design, Analyze & Validate

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

Testing Facilities

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.



Maintenance, Repair, Overhaul (MRO)

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, ARV W-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 & Rebuilding of Tank & Artillery Guns

Gun Factory stands at the forefront of advanced manufacturing, specializing in the production of premium-quality gun barrels. 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.
- Our diverse capabilities encompass artillery gun barrels, offering options of 23 caliber, 39 caliber, and 52 caliber for 155 mm artillery guns.
- Excel in the production and rebuild of 125 mm smoothbore hydraulic autofrettage chrome-plated tank guns.
- Actively involved in the manufacturing of specialized tools and gauges tailored exclusively for the production of 155 mm artillery gun barrels.



Manufacturing of Assemblies, Sub-Assemblies & Parts

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

Fire Control System

- Fire Control Computer
- Charge Temperature Sensor
- Angular Velocity Sensor
- UPS Power Supply
- UPS Battery
- Auto Tracker
- Wind Sensor
- Met Sensor



Fan



Silicon Rectifier



Temperature Control Box



Fire Control Computer



Met Sensor



Launching 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)



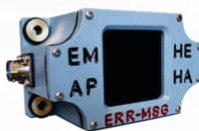
Protection Unit (BZ-1)



PT-800 with Regulator



Memory Unit



Ammo Display Unit



Gun Control Unit (BUK-1)



Joy Stick (BPV-29)



Starting Distribution Box



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



Gyroscope Power Board



Image Stabilizing Voltage Regulator Power Circuit Board



Laser Power Board



Driver Periscope



Control Board



Amplifier Board



Logic Circuit Board



Gunner Periscope

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

Running Gear

- Top Rollers Assembly for Track Support
- Rubber Pads
- Track Metallic Portion – Rubberized
- Track Pin
- Road Wheel Rim Assy
- Sprocket
- Road Wheels
- Track



Road Wheel



Sprocket



Roller Assembly



Impeller Fan



Torsion Bar



Track Assembly



Radiator

Suspension system

- Torsion Bar
- Shock Absorber
- Buffers

Heating & Cooling

- Radiators
- Impeller Fan

Mechanical Systems

Air Conditioning System

- Consists of
 - Inner Unit
 - Outer Unit
 - Control Boxes & Accessories
- Customizable Solution for all Vehicles
- Water Fording Capability
- Optimized for Military Vehicles for
 - Rugged Terrain
 - Extreme Temperatures



Control Boxes



Inner Unit



Control Boxes



Outer Unit

Auxiliary Power Unit

- Custom Made – 4 Stroke Diesel Engine
- Compatible with all Vehicles
- Generator Output: 6 – 10 Kw
- Fuel Tank Capacity: 8L

Vehicle Water Drainage System

- Made as per Military Specifications
- Customizable Solution
- Compatible with all Vehicles



Smoke Grenade Launcher

Nuclear Biological & Chemical Warfare System Filter With Activated Agents

- Filtration of Contaminated Air
- Absorbent Carbon Filtering Layer
- Affective against
 - Toxicants / Chemical Agents
 - Radioactive Dust
 - Biological Agent



Filter

Fuel Dispensing Unit

- Fuel Refilling Pump
- On Vehicle Equipment Tool
- Easy to Use
- Fast Flow – 70 Lits / Min
- Submersible Sealed Pump
- Customizable for any Vehicle



Fuel Refilling Pump

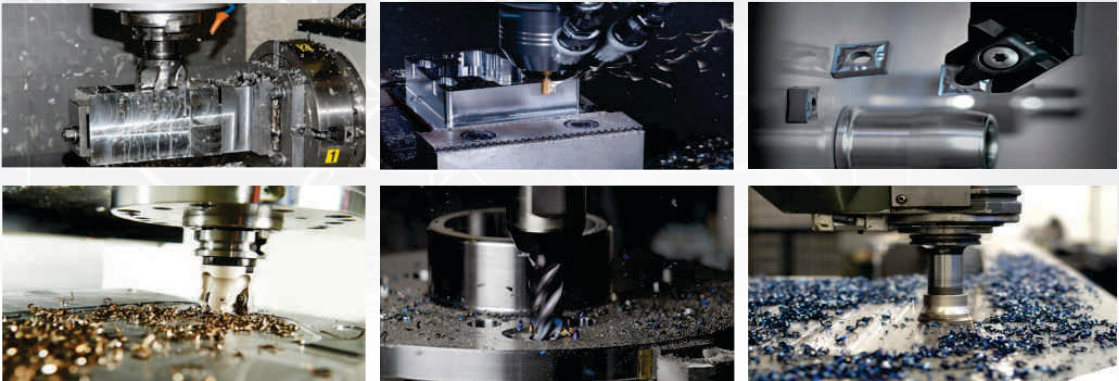
Manufacturing of Assemblies, Sub-Assemblies & Parts

Machining Tools

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 $\varnothing 6 \sim 63\text{mm}$
- Drill $\varnothing 8 \sim 50\text{mm}$
- Reamer $\varnothing 8 \sim 50\text{mm}$
- Tap M5~M52mm
- Counter Sink $\varnothing 8 \sim 40\text{mm}$
- Counter Bore $\varnothing 8 \sim 40\text{mm}$
- Side & Face Cutter
- Spline Hub Cutter
- Forging Dies
- Investment Casting Die
- Thread Rolling Die
- Gauges
- Machine Fixtures
- Drill Jigs



Hot Dip Galvanization

Our Integral solutions have no limits

At HIT (Heavy Industry Taxila), we have consolidated a wide variety of products and services that complement our value proposition.

We offer an effective response for large scale projects with hot dip galvanization.



Protection of steel products against corrosion, long durability and integral coating of structure.

Our robust high-tech plant allows us to have full control of the process, with an installed capacity of 500 tons /month, complying with ASTM quality standards.



Pakistan Largest Galvanizing plant

State of the art automatic plant Hot dipped galvanized in molten zinc.

Crucible : 42 feet long | 2.5 feet wide | 4 feet dep

Galvanizing capacity 500ton/ month.



Quality Standards

ASTMA123 | ASTMA153

Our capacity enables us to galvanize a wide range of items, including telecom towers, pipes, light poles, beams, fence, wind turbine, mobile towers, electric towers, high way steel guard rail and solar panel frames.



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