

# DHANUSH

155 mm

Caliber	:	155 mm / 45 Cal
Range	:	38 km max (with ERFB BB)
Muzzle Velocity	:	881 m/s (for BMCS Zone-6)
Rate of Fire	:	(a) Burst- 3 rds in 30 seconds (b) Intense- 12 rds in 3 min. (c) Sustained- 42 rds in 60 min.
Weight of Equipment	:	12700 kg
Type of Ammunition	:	Compatible with all NATO 155 mm Ammunition System, ERFB BT / BB, HEER, HE M107, HE 77B, SMOKE (ER), ILLUMINATING (ER)
Charge System	:	Bi-Modular Charge System (BMCS), Bag Charge System
Accuracy	:	≤ 1.0%
Max. Speed	:	
(a) Towed	:	70 Kmph
(b) Self Propelled	:	5 Kmph
Life of Barrel (EFCs)	:	1500

## State of Art Gun System:

- All terrain autonomous Gun System.
- Shoot & Scoot Capability.
- High manoeuvrability.
- Equipped with Arty Gun Alignment & Positioning System.
- Precise orientation & fixation by GPS aided INS.
- Muzzle velocity data management for accurate target engagement.
- Auto laying of Gun System.
- Compatible with Arty command control & communication system to achieve precise ballistic calculation.
- Day & Night direct firing capability.



# SHARANG GUN

Up Gunned 130 mm to 155 mm x 45 Cal

Caliber	:	155 / 45 Cal
Range	:	38 km Max. (ERFB-BB)
Muzzle Velocity	:	878 m/s (for BMCS Zone-6)
Rate of Fire	:	(a) Intense- Minimum 3 rds/min in High Zone for 3 min. (b) Sustained- Minimum 42 rds in 60 min.
Weight	:	8450 kg
Bore Dia	:	155 mm
Barrel Length	:	7035 mm
Rifling	:	Right Handed
Type of Ammunition	:	Compatible with all NATO 155 mm Ammunition System, HE ERFB BT / BB SMOKE, ILLUMINATING.
Charge System	:	Bi-Modular Charge System (BMCS), Bag Charge System
Life of Barrel (EFCs)	:	1500



## LIGHT FIELD GUN

105 mm



Caliber	: 105 mm / 37 Cal
Range	: 2000 m (Minimum), 17200 m (Maximum)
Muzzle Velocity	: 716 m/s
Rate of Fire	: (a) Normal- 4 rds/min (b) Intense- 6 rds/min (upto 10 mins) (c) Sustained (upto charge 5)- 1 rd/min (for 2 hours) (d) Sustained (for charge super)- 1 rd per 2 mins (for 2 hours)
Weight	: 2380 kg
Bore Dia	: 105 mm
Barrel Length	: 3890 mm
Rifling	: Right Handed
Type of Ammunition	: HE, SMOKE, HESH, ILLUMINATING

## AIR DEFENCE GUN

40 mm

Caliber	: 40 mm
Range	: 12600 m (Horizontal)
Rate of Fire	: 270-300 rds/min
Barrel length	: 2800 mm
Weight of Complete Gun	: 5100 kg
Elevation	: (-) 5° to 90°
Traverse	: 360°
Max. Traversing Speed	: > 85°/sec
Max. Elevating Speed	: > 45°/sec
Ammunition	: HE with Blast Effect
Effective Range (Air Target)	: At least 3500 m
Effective Height (Air Target)	: At least 1500 m
EOFCS	: Target can be tracked using EOFCS at Max Range - 10 km and Min Range - 200 m
Laser Rays Finder	: 10 km

### Other Upgraded Features

Type of Air Target	: Missiles, RPAS, Helicopters & Drones
Drive for Slewing in Elevation & Traverse	: All Electric drive with brushless motors
Gun Powder Supply System	: On board batteries & battery charger are available. Capacity of 4 hrs of continuous operation. Gun can operate from commercial main & 220 V 50 Hz AC



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## LIGHT WEIGHT RECOIL LESS LAUNCHER

84 mm

Caliber	:	84 mm
Max. Range	:	700 m (for HEAT Ammunition) 1000 m (for HE Ammunition) 2000 m (for Illuminating Ammunition)
Muzzle Velocity	:	305 m/s (for HEAT Ammunition) 240 m/s (for HE Ammunition)
Rate of Fire	:	6 rds/min
Weight	:	10 kg
Armor Penetration	:	400 mm
Length of Gun	:	1070 mm
Types of Ammunition	:	HE, HEAT, TP, TPT, SMOKE, ILLUMINATING



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## MORTAR

120 mm

Range	:	6650 m (HE M-44) 5900 m (PEPA LP- Without Rocket Assistance) 8950 m (PEPA LP- With Rocket Assistance)
Maximum Muzzle Velocity	:	With HE M-44 Bomb - 331 m/s With PEPA LP Bomb - 305 m/s
Rate of Fire	:	By gravity firing (a) With relaying the Mortar for every round - 5 to 6 rds/min (b) Without relaying the Mortar for every round - 8 to 10 rds/min By lanyard firing (a) With relaying the Mortar for every round- 3 to 4 rds/min (b) Without relaying the Mortar for every round- 5 to 6 rds/min
Total Wt. of the Equipment with sight and Accessories	:	421 kg
Elevation Limits	:	45 deg to 85 deg
Traverse (right or left)	:	
(a) By moving the Bipod	:	360 degree
(b) Without moving the Bipod	:	16° 45' to 31° 40'



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## MORTAR

81 mm

Range	:	5000 m (Maximum)
Maximum Muzzle Velocity	:	295 m/s
Rate of Fire	:	6-8 rds/min (Relaying) 20 rds/min (Intense)
Weight	:	135 kg
Type of Firing Mechanism	:	Fixed Firing Pin Type
Length of the Barrel with Breech Block	:	1550 mm
Elevation Limits	:	30 degree to 85 degree
Traverse (right or left)	:	
(a) By moving the Bipod	:	360 degree
(b) Without moving the Bipod	:	7° 30' to 18° 30'
Life of Barrel (EFCs)	:	2000



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## MORTAR

51 mm

Range	:	850 m (Maximum)
Muzzle Velocity	:	107 m/s
Rate of Fire	:	8 rds/min (Normal) 12 rds/min (Intense)
Total Weight Of Equipment with Breech Base	:	4.56 kg
Type of Firing Mechanism	:	Trip Action
Length of Barrel	:	540±1 mm
Strike Protrusion	:	2.9 mm (L) 3.5 mm (H)
Life of Barrel (EFCs)	:	4000



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## NAVAL GUN

30 mm

Nomenclature	:	30 mm Six Barrel Naval Gun
Feeding of Automatic Gun with Cartridges	:	Continuous, Belt
Ammunition Allowance Located in Magazine on Gun mount	:	2000 Cartridges
Ammunition Allowance stowed in feed bin of Gun Mount	:	1000 Cartridges
Automatic Gun rate of Fire	:	4000 to 5000 rds per minute
Maximum Angles of Traverse Reflection	:	$\pm 180^\circ - 5^\circ$
Maximum Angles of Elevation	:	
(a) Angle of Elevation	:	$+ 88^\circ (+2^\circ \text{ To } -1^\circ)$
(b) Angle of Depression	:	$-12^\circ \pm 2^\circ$



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## KAVACH

Weight	:	1680 kg
Height	:	2690 mm
Width	:	1300 mm (dia)
Length	:	1300 mm (dia)
Mode of Operation	:	Power and Manual
Bore of Barrel	:	105.6 + 0.4 mm

### BRIEF:-

Kavach is an anti missile chaff rocket system. This system is designed to exploit an anti-missile defence chaff rocket system of Medium / Long range of 105 mm and short range of 98 mm caliber in confusion, distraction and seduction modes respectively.



## CANON

30 mm



Effective Range	:	1500 m (at Armoured Target) 2000-2500 m (at Air Target)
Muzzle Velocity	:	960 m/s
Rate of Fire	:	550 rds/min
Weight	:	115 kg
Caliber	:	30 mm
Type of Feed	:	Two belt system (a) Rifling (16 Grooves) (b) Triggering (Electrical)

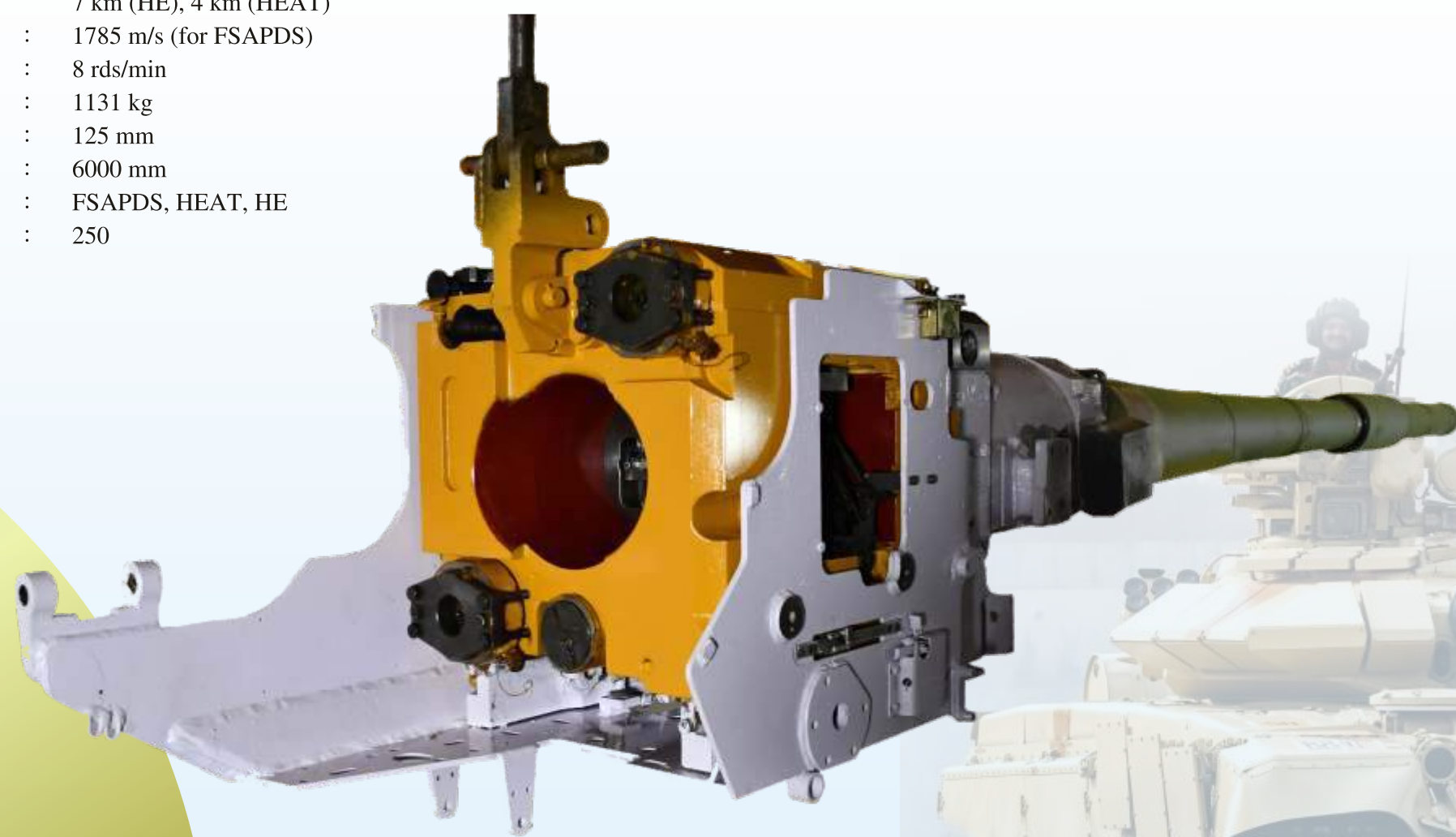
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## ARTICLE FOR TANK

125 mm



Caliber	: 125 mm Smooth bore
Range	: 2.5 km (FSAPDS), 7 km (HE), 4 km (HEAT)
Muzzle Velocity	: 1785 m/s (for FSAPDS)
Rate of Fire	: 8 rds/min
Weight	: 1131 kg
Bore Dia	: 125 mm
Barrel Length	: 6000 mm
Type of Ammunition	: FSAPDS, HEAT, HE
Life of Barrel (EFCs)	: 250






# SMALL ARMS

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## MMG MAG GUN

7.62 x 51 mm



Caliber	:	7.62 x 51 mm
Effective Range	:	1800 m
Rate of Fire	:	600-1000 rpm (Adjustable)
Mode of Fire	:	Auto
Muzzle Velocity	:	840 m/s
Operation	:	Gas Operated Tilting Bolt
Weight	:	11 kg
Barrel Weight	:	3 kg
Length	:	1048 mm
Feed	:	Belt Fed
Safety	:	Applied & Mechanical
Tripod	:	Folding, Adjustable & Free Traverse 360°

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## BELT FED LMG

7.62 x 51 mm

Caliber	: 7.62 x 51 mm
Range	: 800 m
Rate of Fire	: 600 rds/min
Mode of Fire	: Single & Auto
Muzzle Velocity	: 800 m/s
Operation	: Gas operated tilting bolt
Weight	: 9.7 kg (without magazine)
Length	: 1200 mm
Bipod	: Folding and Adjustable
Picatinny Rail	: MIL- STD 1913
Ammunition	: 7.62 mm Belted M80



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## TRICHY ASSAULT RIFLE (TAR)

7.62 x 39 mm

Caliber	: 7.62 x 39 mm
Effective Range	: 350 m
Mode of Fire	: Single Shot & Auto
Muzzle Velocity	: 710-715 m/s
Type of Feed	: Curved Magazine with 30 round capacity
Weight	: 3.6 kg
Rifling	: 4 Grooves
Breech Bolt	: Rotating Type
Versions	: Side foldable, Fixed Butt, Down Foldable, Extendable Butt



## ISHAPORE ASSAULT RIFLE

7.62 x 51 mm

Caliber	: 7.62 x 51 mm
Range	: 500 m
Rate of Fire	: 600-650 rds/min
Mode of Fire	: Single Shot & Auto
Operation	: Gas Operated
Weight	: 4 kg (without Magazine)
Length of Weapon	: 700 mm (Butt folded) 925 mm (Butt extended)
Magazine Capacity	: 20 rds
Safety	: Mechanical & Applied



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## SNIPER

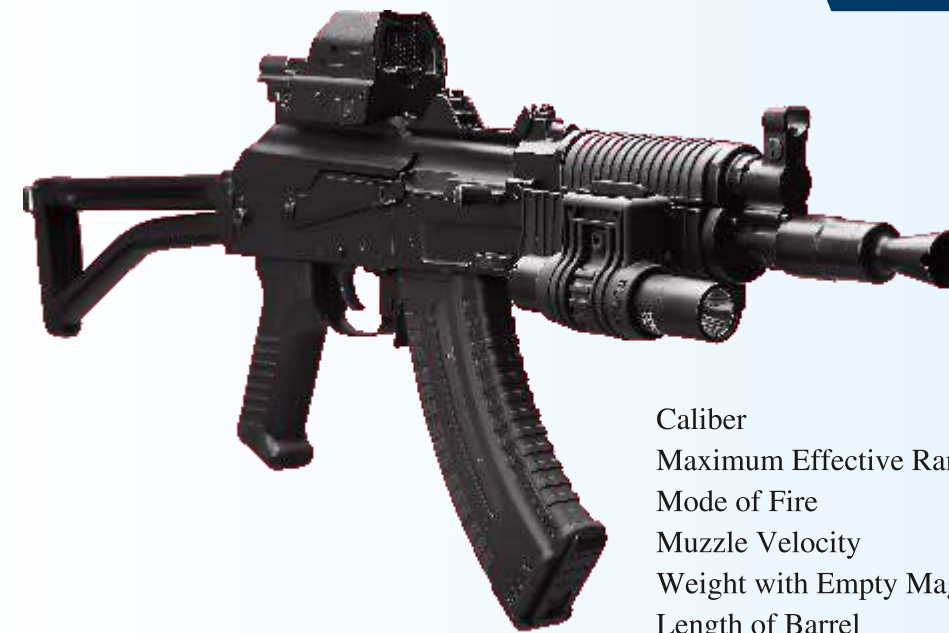
8.6 x 70 mm



Caliber	: 8.6 x 70 mm
Range	: 1500 m
Mode of Fire	: Single
Operation	: Direct lug locking with barrel
Weight	: 7.85 kg (without Mag., Sight & Bipod)
Length of Weapon	: 1145 mm (without flash suppressor)
Magazine Capacity	: 05 rds
Safety	: Quick release push button type

## TRICA CARBINE

7.62 x 39 mm



Caliber	: 7.62 x 39 mm
Maximum Effective Range	: 150 m - 175 m
Mode of Fire	: Single & Auto
Muzzle Velocity	: 620-650 m/s
Weight with Empty Magazine	: 3 kg
Length of Barrel	: 212mm
No. of Grooves	: 4
Feeding	: Curved Magazine
Breech Bolt	: Rotating Type

## SNIPER MK-1

7.62 x 51 mm



Caliber	: 7.62 x 51 mm
Range	: 800 m
Mode of fire	: Single
Operation	: Direct lug locking with barrel
Weight	: 4.4 kg (without Mag., Sight & Bipod)
Length of Weapon	: 1055 mm (without flash suppressor)
Magazine Capacity	: 05 rds
Safety	: Quick release push button type

## CLOSE QUARTER BATTLE CARBINE (CQB)

5.56 x 45 mm



Caliber	: 5.56 x 45 mm
Effective Range	: 200 m
Muzzle Velocity	: 750 m/s
Rate of Fire	: 700 rpm
Mode of Fire	: Single & Auto
Length	: 790 mm (Butt Extd.) 560 mm (Butt Folded)
Weight	: 3.2 kg (without magazine)
Magazine Capacity	: 30 rds, High Strength Polymer Magazine
Safety	: Applied And Mechanical Safety
Sling	: 3-Point Sling

## JOINT VENTURE PROTECTIVE CARBINE (JVPC)

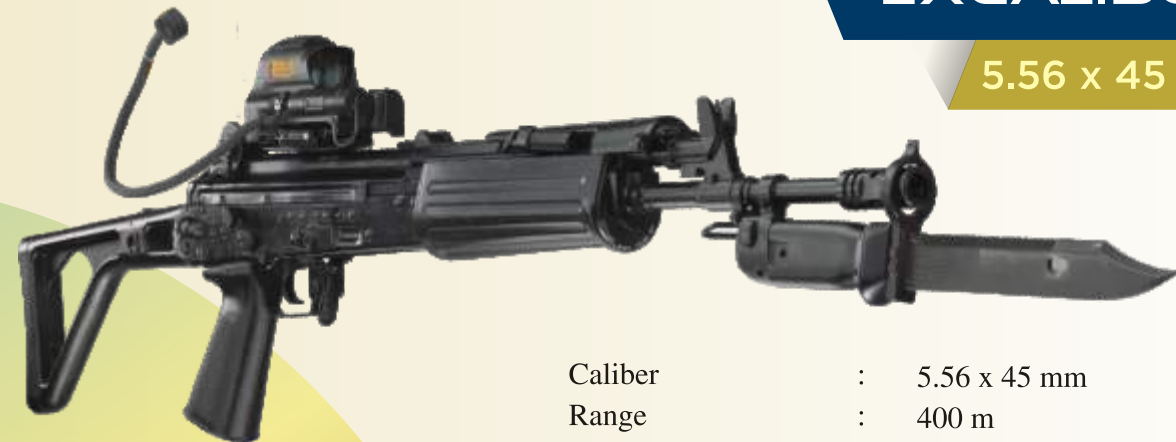
5.56 x 30 mm



Caliber	: 5.56 x 30 mm
Effective Range	: 100 m
Mode of Fire	: Single & Auto
Rate of Fire	: 800 rpm
Weight	: < 3 kg (Without Magazine)
Overall Length	: 750 mm (Butt Extended) 560 mm (Butt Retracted)
Barrel Length	: 300 mm
Rifling	: 1 turn in 250 mm RH
Operation	: Gas Operated Rotating Bolt
Magazine Capacity	: 30 rds
Sights	: Iron, Reflex, IR, Laser
Safety	: Mechanical and Applied
Accessories	: Bayonet, Muzzle Cap, Sling

## EXCALIBUR

5.56 x 45 mm



Caliber	: 5.56 x 45 mm
Range	: 400 m
Mode of Fire	: Single Shot & Auto
Rate of Fire	: 600-650 rds/min
Operation	: Gas Operated
Weight	: 3.90 kg (without Magazine)
Length of Weapon	: 895 mm (Butt Extended) 665 mm (Butt Folded)
Magazine Capacity	: 20/30 rds
Safety	: Mechanical & Applied

## STABILIZED REMOTE CONTROLLED GUN

12.7 mm

Caliber	: 12.7 x 99 mm
Effective Range	: 1829 m
Firing	: Remote Control
Rate of Fire	: 450-600 rds/min
Muzzle Velocity	: 929.64 m/s
Barrel Length	: 1143 mm
No. of Grooves	: 8
Weight of Gun	: 38.1 kg
Action	: Short Recoil Operated
Type of Feed	: Belt Feed



## AIR DEFENCE GUN

12.7 mm



Caliber	: 12.7 mm
Effective Range	: i) At Air Target - 1500 m ii) At Ground Target - 2000 m
Muzzle Velocity	: 845 m/s
Rate of Fire	: 700-800 rds/min
Weight	: 25 kg
Type of Feed	: Belt System
Rifling	: 8 Grooves

## ANTI-MATERIAL RIFLE (VIDHWANSAK)

14.5 / 20 mm



Multi Caliber	: 14.5 x 114 mm	20 x 82 mm
Range	: 1800 m	1300 m
Muzzle Velocity	: 1080 m/s	720 m/s
Weight	: 29 kg	26 kg
Overall Length	: 2.015 m	1.795 m
Barrel	: 8 Grooved 1.22 m Length	8 Grooved 1m Length
	: Quick Change Type	Quick Change Type
Pitch of Rifle	: 1 : 420 mm	1 : 560 mm

## UNDER BARREL GRENADE LAUNCHER

40 mm



Caliber	: 40 mm
Effective Range	: 28 m to 375 m (approx.)
Muzzle Velocity	: 76 m/s
Weight of Launcher	: 1.6 kg
Loading	: Breech Loading
Barrel Length	: 250 mm
Barrel Rifling	: 6 Grooves RH
Overall Length	: 375 mm
Safety	: In-built safety for trigger operation and barrel locking

## MULTI GRENADE LAUNCHER

40 mm



Caliber	: 40 mm
Effective Range	: 80 m (Minimum), 375 m (Maximum)
Muzzle Velocity	: 76 m/s
Rate of Fire	: 18 rpm
Weight	: 5.9 kg (empty)
Function	: Semi-automatic, Shoulder-fired Grenade Launcher
Length	: 760 mm (Stock Extended), 566 mm (Stock Folded)
Barrel	: 310 mm
Magazine Capacity	: 6 rds
Sights	: Optical Red Dot Sight

## MULTI SHELL LAUNCHER

38 mm



Caliber	: 38 mm
Max. Effective Range	: 130 m
Rate of Fire	: 12 rds/min
Weight of Rifle	: 4.8 kg (approx.)
Barrel Length	: About 200 mm
Length of Launcher	: Stock Extended: 710 mm, Stock Folded: 565 mm
Safety	: On both side of Body
Type of Shells	: Tear Smoke Shell, Rubber Bullets and Batons

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## TEAR GAS GUN

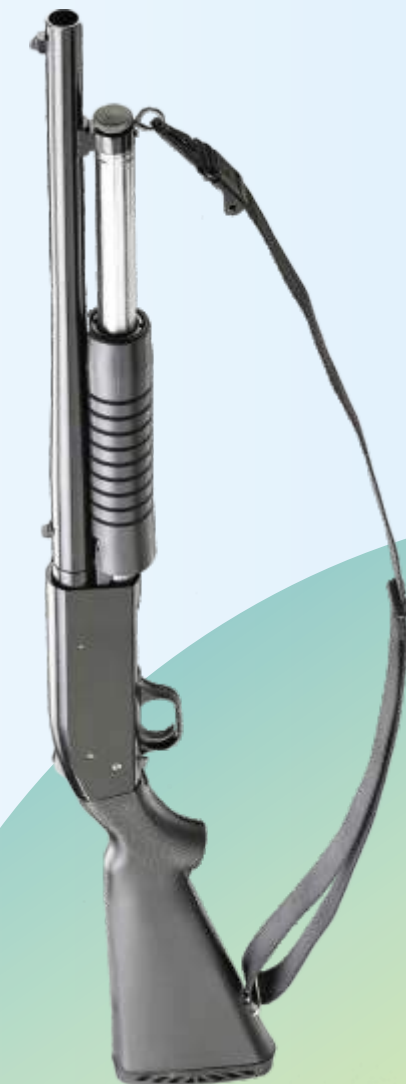
38.8 mm



Caliber	: 38.8 mm
Range	: 50 m
Mode of Fire	: Single Shot
Rate of Fire	: 10 Shells/min
Weight	: 2.3 kg
Length of Weapon	: 680 mm
Trigger Pull	: 6.5 kg

## PUMP ACTION GUN

12 Bore



Caliber	: 12 Bore
Range	: 25.4 m
Mode of Fire	: Single Shot
Operation	: Single Shot Breech Loaded
Weight	: 3.05 kg (PB) 3.06 kg (NPB)
Length of Weapon	: 952 mm (PB) 994 mm (NPB)
Magazine Capacity	: 4 rds
Safety	: Mechanical

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## SPORTING RIFLE

30-06



Caliber : 0.30"  
 Range : 400 m  
 Operation : Bolt Action  
 Weight : 3 kg  
 Length of Weapon : 1125 mm  
 Magazine Capacity : 3 or 5 rds  
 Safety : Quick release  
 push button type

## SPORTING RIFLE

0.22"



Caliber : 0.22"  
 Range : 200 m  
 Operation : Bolt Action  
 Weight : 3 kg  
 Length of Weapon : 1092 mm  
 Magazine Capacity : 10 rds  
 Trigger Pull : Minimum 1 kg

## SPORTING RIFLE

0.315"



Caliber : 0.315"  
 Range : 275 m  
 Operation : Bolt Action  
 Weight of Rifle : 3.34 kg  
 Length of Barrel : 640 mm  
 Length of Weapon : 1117 mm  
 Magazine Capacity : 5 rds

## PISTOL

9mm



Caliber : 9 mm  
 Range : 50 m  
 Operation : Simple Blow Back  
 Weight : 935 g (with Empty Magazine)  
 Action : Double Action  
 Length of Weapon : 205 mm  
 Magazine Capacity : 13 rds  
 Safety : Mechanical  
 Ammunition Used : Cartridge SA Ball 9 mm (Parabellum)

## PISTOL MK II

0.32"



Caliber : 0.32"  
 Range : 18 m  
 Operation : Simple Blow Back  
 Weight : 640 g (with Empty Magazine)  
 Action : Double Action  
 Length Of Weapon : 154 mm  
 Magazine Capacity : 8 rds  
 Safety : Mechanical as well as Inbuilt Safety

## PISTOL MARK-II (ASHANI)

0.32"

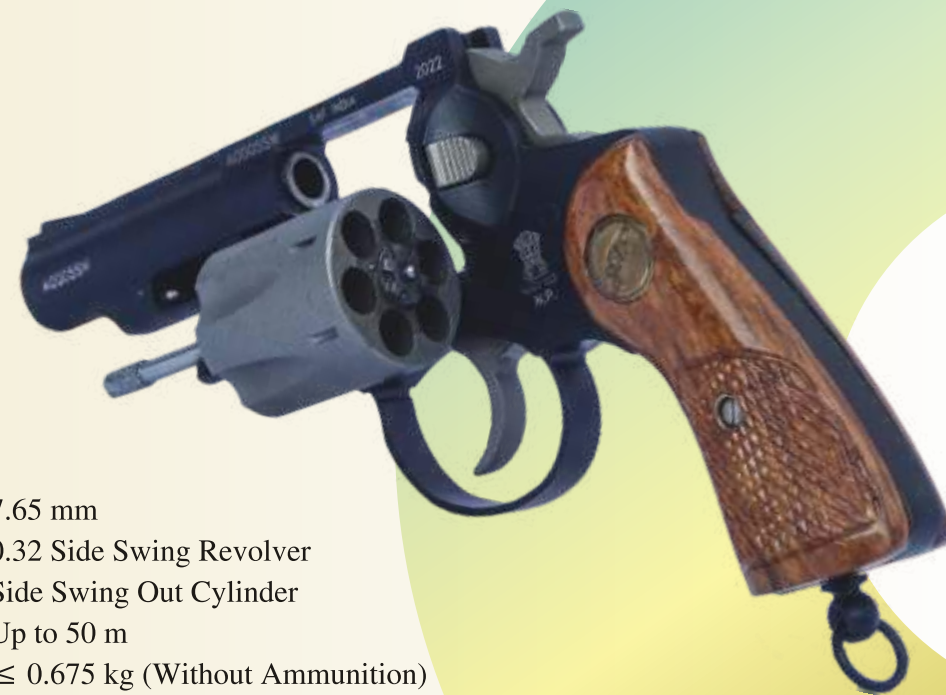
Calibre	:	0.32"
Range	:	18 m
Action	:	Semi-automatic Blow Back
Weight of Pistol	:	680 g
Magazine Capacity	:	8 Cartridges
Barrel Length	:	91.44 mm
Chamber	:	Suitable for 0.32" ACP Rimmed Cartridges
Sight	:	Fixed
Grip	:	Plastic Grip



## SIDE SWING REVOLVER

0.32"

Caliber	:	7.65 mm
Model	:	0.32 Side Swing Revolver
Loading & Ejection	:	Side Swing Out Cylinder
Range	:	Up to 50 m
Weight	:	≤ 0.675 kg (Without Ammunition)
Length of Weapon	:	187.7 mm
Mechanism	:	Single Action and Double Action



## PFFC

40 mm

Nomenclature : Shell 40 mm PFFC  
(Pre Formed Fragmented Cubes)

### **Ammunition Details**

Fired From : 40 mm L 70  
Muzzle Velocity : 1005 m/s  
Maximum Range : 5000 m  
Rate of Fire : 120-140 rpm  
Fuze : Proximity Fuze FB 40



## SRGM TP

Nomenclature : 76/62 SRGM (Super Rapid Gun Mount)  
TP (Target Practice), TPT (Target Practice Tracer)

### **Ammunition Details**

Fired From : 76/62 SRGM Gun  
Caliber : 76 mm  
Rate of Fire : 120 rpm  
Muzzle Velocity : 910 m/s, Spin – 24100 rpm  
Range : 15.9 km (min) to 20 km (max)  
Type of Elevation (deg) : 85°



## SHELL HE ERFB-BT/BB

155 mm

Nomenclature : SHELL 155 mm HE ERFB BT / BB  
**Ammunition Details**  
HE Composition : TNT-99%, N.C.-0.5%,  
PNT-0.2%, HNS-0.3%  
Range : 30 km  
Overall Length : 843 mm  
Weight of body on  
mean Dimensions : 32.3-33.75 kg



## SHELL ILLUMINATING (ERFB)

155 mm

Nomenclature : SHELL 155 mm ILLUMINATING ERFB  
**Ammunition Details**  
Net Explosive Content : 2.6 kg (approx.)  
Luminosity : 750,000 Candela minimum  
Range : 24 km (32 km extended  
range with BB)  
Time of Burning : 90 sec (minimum)  
Size of Shell approx. (D x L) : Ø154.5 mm x 843 mm



## SHELL HE M107

155 mm

Nomenclature : SHELL 155 mm HE M107  
**Ammunition Details**  
Net Explosive Content : 6.6 kg  
Type of Filling : High Explosive shell filling (TNT)  
Range : 18 Km  
Size of Shell approx. (D x L) : Ø154.71 mm x length 604 mm  
Weight of body with band &  
pipe disc : 35.136 ± 0.612 Kg



## SHELL SCREENING SMOKE PARENTHESSES (ERFB)

155 mm

Nomenclature : SHELL 155 mm Screening Smoke ERFB  
**Ammunition Details**  
Maximum Range : Boat Tail - 30 km  
Base Bleed - 39 km  
Operation Limits : MV - 950 m/sec  
Overall Length : Boat Tail - 843 mm  
Base Bleed - 861 mm  
Compatible Fuze : Electronic Time M8611  
Burning Time : 90-120 sec  
Pyro Technic Mass : 6 kg  
Optimum Height : 400 m





## SHELL HEAT TANK AMMN

125 mm



Nomenclature	:	SHELL 125 mm HEAT TANK AMMN
<b>Ammunition Details</b>		
Mass of Complete Round	:	29 kg
Muzzle Velocity at +15°C	:	905 m/s
Maximum Range	:	4000 m
Point Blank Range	:	960 m
Armour Thickness defeated at	:	
(a) Normal Attack	:	500 mm
(b) 60 degree angle of attack	:	220 mm
Max. Chamber Pressure at +15°C (True)	:	353 mpa

## SHELL TANK AMMN HE

125 mm

Nomenclature	:	SHELL 125 mm HE Tank Ammn
<b>Ammunition Details</b>		
Filled Mass of Shell with Fuze & Stabilizer assly	:	23 kg
Filling Type in Shell std.	:	RDX / TNT (60:40)
Maximum Chamber Pressure at +15°C	:	412 mpa
Maximum Range	:	5 km
Muzzle Velocity at +15°C	:	850 m/s



## SHELL MORTAR PWP

120 mm



Nomenclature	:	SHELL 120 mm MORTAR PWP
<b>Ammunition Details</b>		
Estimated Mass of Bomb	:	8.530±0.350 kg
Total Length of Ammunition	:	682.80 mm
Mass of the Filled Bomb	:	13.225 kg
Maximum Dia	:	119.6 mm (max)
Maximum Range	:	6.512 km
Muzzle Velocity	:	331 m/s

## SHELL TANK AMMUNITION TK HESH

120 mm

Nomenclature	:	SHELL 120 mm Tank Ammn HESH
<b>Ammunition Details</b>		
Defeating Capability	:	135mm RHA Plate at 1100 m
Length of Complete Round	:	998 mm
Weight of Complete Round	:	22.2 kg
Effective Range	:	2.5 km
Type of Propellant	:	AP/s 400-120
Weight of Propellant Charge (Normal)	:	3.3 kg



Nomenclature	:	SHELL 120 mm MORTAR HE
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## SHELL MORTAR HE

120 mm



<b>Ammunition Details</b>		
Explosive Filling in Projectile	:	2.448±0.08 kg TNT
Total Length of Ammunition	:	680.10 mm
Total Mass of Ammunition	:	13.2 - 13.4 kg
Maximum Dia.	:	119.6 mm (max)
Maximum Range	:	6.5 km
Muzzle Velocity	:	118.87 m/s at charge 0 331.01 m/s at charge 7

## SHELL IFG HE

105 mm



Nomenclature	:	SHELL 105 mm IFG HE
<b>Ammunition Details</b>		
Mass of the Filled Shell	:	16.97 kg
Muzzle Velocity	:	591 m/s (Normal charge), 710 m/s (Supercharge)
Type of Filling	:	High Explosive (RDX/TNT)
Range	:	17.6 km (Variable range can be achieved by using different type of catg. Case such as normal charge and super charge)
Size of Shell approx. (D x L)	:	Ø104.72 mm x Length 448.0 mm
Weight of Shell	:	13.350±0.150 Kg

## SHELL IFG COLOUR SMOKE

105 mm



Nomenclature	:	SHELL 105 mm IFG Colour Smoke
<b>Ammunition Details</b>		
Mass of the Filled Shell	:	15.970 kg
Colour	:	Red, Orange and blue colour for signalling purpose
Net Explosive Content	:	Red- 450 g (approx.), Orange- 450 g (approx.) Blue- 410 g (approx.)
Weight of Shell	:	10.815 ± 0.080 kg
Time of Burning	:	45 sec (minimum)
Size of Shell approx. (D x L)	:	ø104.5 mm x length 450 mm

## SHELL IFG ILLG

105 mm



Nomenclature	:	SHELL 105 mm IFG ILLUMINATING
<b>Ammunition Details</b>		
Mass of the Filled Shell	:	15.88 ± 0.1 kg
Net Explosive Content	:	800 g (approx.)
Weight of Shell	:	10.815 ± 0.080 kg
Time of Burning	:	25 sec (minimum)
Size of Shell approx. (D x L)	:	ø104.5 mm x length 450 mm
Height of Burst	:	400 m (approx.)
Ground Covering Area	:	600 m (radius)
Maximum Range	:	17 km
Luminosity	:	700,000 Candela
Duration of Illumination	:	30 sec (minimum)
Rate of Descent	:	10 m/sec (maximum)

## MORTAR SHELL HE

51 mm

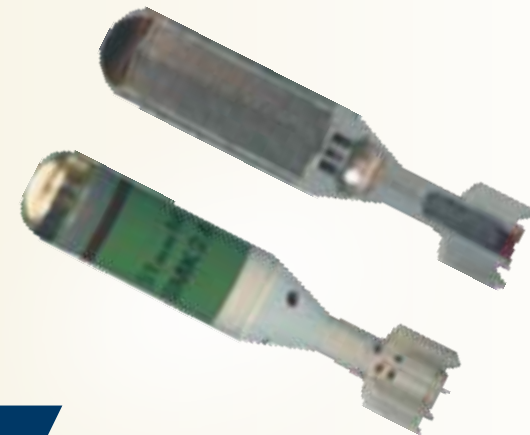


Nomenclature	:	SHELL 51 mm MORTAR HE
<b>Ammunition Details</b>		
Total Length of Ammunition	:	282.96 mm
Total Mass of Ammunition	:	850 g
Explosive Filled in Projectile	:	109 g of RDX / WAX / PELLET 88.12
Maximum Range	:	800 metres
Muzzle Velocity	:	79.5 m/s at charge-1 101.0 m/s at charge-2

## SHELL MORTAR SMOKE 2A

51 mm

Nomenclature	:	SHELL 51 mm MORTAR SMOKE 2A
<b>Ammunition Details</b>		
Total Length of Ammunition	:	282 ± 1 mm
Diameter	:	50.72-50.87 mm
Mass of the Filled Bomb	:	935 g (max)
Net Explosive Content	:	450 g
Maximum Range	:	850 m
Duration of Smoke	:	Over 120 seconds



## BOMB ILLUMINATING

51 mm



Nomenclature	:	SHELL 51 mm BOMB ILLUMINATING
<b>Ammunition Details</b>		
Total Length of Ammunition	:	283 ± 2 mm
Diameter	:	50.72-50.87 mm
Mass of the Filled Bomb	:	930 ± 25 g
Net Explosive Content	:	215 gm (approx.)
Range with 3.5 to 1.5 sec delay setting	:	300 m to 900 m
Illumination Period	:	30 sec (minimum)
Luminosity	:	250,000 candela

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## STABALIZER - PINAKA ROCKET SYSTEM

Nomenclature	:	STABALIZER- PINAKA ROCKET SYSTEM
Stab. Assy. Weight	:	20.5 kg (max.) (without fin closing ring)
Stab. Assy. Length	:	456.5 mm
Overall Length of Rocket	:	4950 mm
Warhead Weight	:	100 kg
Filled Mass	:	176.8 -179.7 kg
Total Weight	:	276 kg
Rate of Fire	:	44 sec approx.
Caliber	:	214 mm
Range	:	40 km



## FUZE B 15 FOR SHELL HEAT

Nomenclature	:	FUZE B 15 for SHELL HEAT
Type of Fuze	:	Mechanical (PIBD)
Used In	:	SHELL 125 HEAT



## FUZE FOR MORTARS

81 mm, 120 mm

Nomenclature	:	FUZE for 81mm / 120 mm MORTAR
Type of Fuze	:	Direct action Mechanical
Used In	:	81 mm Mortar (MK-8) 120 mm Mortar (MK-9)



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# MBT- ARJUN

The MBT ARJUN is equipped with accurate & superior firepower, all-terrain mobility and an invincible multi layered protection provided by an array of advanced technology systems. It can take on the enemy during day & night conditions and in both static & dynamic modes. By virtue of these capabilities, this indigenous MBT proves to be at par with any contemporary main battle tank across the globe. This tank is particularly configured and designed for Indian conditions and hence it is suitable for deployment to protect the frontiers in an effective manner.



## SPECIFICATIONS

Weight	: 68 tons
Crew	: 4
Overall length	: 10.642 M
Overall Height	: 3.182 M
Overall width	: 3.950 M
Maximum road Speed	: 58 kmph
Engine power	: 1400 HP
Power to Weight Ratio	: 20.59 HP/T
Shallow Fording	: 1.4M
Fording	: 2.15 M
Vertical Obstacle	: 0.45M

Trench Crossing	: 2.0M
Gradient	: 20°
Gun Bore	: 120mm (Rifled)
Rate of Fire	: 6-8 rds/min
Ammunition	: 39 (FASPDS/HESH,PCB,TB & CANNON Launched Guided Missile)
Coaxial Machine Gun	: 7.62mm
Anti-Aircraft Machine Gun	: 12.7mm NSVT (ON RCWS)

# T-90 BHISHMA

The T-90S main battle tank (MBT) is an advanced version of the T-series of tanks, offering increased firepower, mobility and protection. It is manufactured by HVF, an original equipment manufacturer, in Chennai. In February 2001, the Indian Army signed a contract for 310 T-90S tanks; 124 were completed in Russia, and the rest were delivered in 'knocked down' form for final assembly in India. The T-90S armament includes one 125mm 2A46M smooth bore gun that is stabilised in two axes and fitted with a thermal sleeve.



## SPECIFICATIONS

Weight	: 46.5 tons	Vertical Obstacle	: 0.85M
Crew	: 3	Trench Crossing	: 2.6 to 2.8 M
Overall Length	: 9.53 M	Gradient	: 30°
Overall Height	: 2.865 M	Gun Bore	: 125mm (Smooth)
Overall Width	: 3.780 M	Rate of Fire	: 8 Rds/min
Maximum Road Speed	: 60 kmph	Ammunition	: 43(Guided Missile /FASPDS/ HEAT/HE)
Engine power	: 1000 HP	Coaxial Machine Gun	: 7.62mm
Power to Weight Ratio	: 21.5 HP/T	Anti-Aircraft Machine Gun	: 12.7mm NSVT
Shallow Fording	: 1.8M		
Fording	: 5 M (WITH SNORKEL)		

# AJEYA TANK T-72

The T-72 has greater mobility as its 780 hp engine appears to be remarkably smoke-free and smooth-running, having eliminated the excessive vibration. The T-72 has better armor protection due to the use of layered armor. The tank is fitted with a 125mm D-81 smoothbore gun, a 7.62mm co-axial machine gun and a 12.7mm air defence machine gun mounted on the commander's cupola. The T-72 carries 44 rounds of 125 mm ammunition, 22 rounds of which are carried on an automatic loading carousel.



## SPECIFICATIONS

Weight	: 43 Tons
Crew	: 3
Overall length	: 9.53 M
Overall Height	: 2.190 M
Overall width	: 3.590 M
Maximum Road Speed	: 60 Kmph
Engine power	: 780 HP
Power to Weight Ratio	: 19 HP/T
Shallow Fording	: 1.8M
Fording	: 5 M (WITH SNORKEL)

Vertical Obstacle	: 0.85M
Trench Crossing	: 2.6 to 2.8 M
Gradient	: 30°
Gun Bore	: 125mm (Smooth)
Rate of Fire	: 8 Rds/Min
Ammunition	: 44 (FASPDS/HEAT/HE)
Coaxial Machine Gun	: 7.62mm
Anti-Aircraft Machine Gun:	12.7mm NSVT

# BRIDGE LAYER TANK (BLT) T-72

Bridge Layer Tank (BLT) provides capabilities to negotiate natural and man-made anti-tank obstacles to an advancing tank column. It can lay its bridge instantly and recover the same from the far bank, after the entire tank column has crossed over. Capability exists to base it on any other tank of West or East European origin. The BLT can lay two types of bridge, i.e. a 20m scissors bridge with an MLC 60 load classification and a 22m scissors bridge, with an MLC 70 load classification.



## SPECIFICATIONS

Weight	: 49 Tons
Crew	: 2
Overall Length	: 11.36 M
Overall Height	: 3.8 M
Overall Width	: 4.0 M
Maximum Road Speed	: 60 kmph
Engine power	: 780 HP
Power to Weight Ratio	: 16.77 HP/T
Bridge Type	: Scissors Launch

Shallow Fording	: 1.8M (Medium Fording with Snorkel)
Vertical Obstacle	: 0.76 M
Trench Crossing	: 2.4 M
Gradient	: 25°
Anti-Aircraft Machine Gun	: 12.7mm NSVT

# TRAWL T-72

Trawl assembly is an equipment designed to create a Vehicle Safe Lane (VSL) of 5.39 m width through a minefield using four number of trawl tanks in tandem. It is a combination of roller and plough type.



## SPECIFICATIONS

Weight	: 50.5 Tons
Crew	: 3
Overall length	: 9.53 M
Overall Height	: 2.190 M
Overall width	: 3.590 M
Maximum Road Speed	: 60 Kmph
Engine power	: 780 HP
Power to Weight Ratio	: 15.44 HP/T
Shallow Fording	: 1.8M

Fording	: 5 M (WITH SNORKEL)
Vertical Obstacle	: 0.85M
Trench Crossing	: 2.6 to 2.8 M
Gradient	: 30°
Gun Bore 125mm (Smooth)	
Rate of Fire	: 8 Rds/Min
Ammunition	: 44(FASPDS/HEAT/HE)
Coaxial Machine Gun	: 7.62mm
Anti-Aircraft Machine Gun	: 12.7mm NSVT

# BMP – II SARATH THE CHARRIOT TO VICTORY

BMP-II Powered by a powerful mobile engine which meets all tactical requirements of mobility in a battlefield, travels at an incredible speed of 65 kmph, with easy steering ability in cross country terrain. SARATH is a truly amphibious vehicle which can travel at 7 kmph on water and can overcome slopes up to 35° and can cross obstacles of 0.7m. Sarath can be easily transported by air due to its low weight. Protected with armoured plates all around, it ensures a high degree of protection. It offers a chameleon like camouflage with the help of Smoke grenades.



## SPECIFICATIONS

Weight	: 14 Ton + 2%	Gradient	: 35°
Crew	: 10	Main Gun	: 30 mm 2A42 Cannon with 500 Rounds Stowage
Overall Length	: 6735 MM	Secondary Armament	: 7.62 PKT gun with 2000 Rounds Stowage
Overall Height	: 3150 MM	ATGM	: Konkurs Missiles
Overall width	: 2450 MM	Communication	: TADIRAN (External), DCH (Internal)
Engine power	: 300 HP	Navigation	: GPS & ALNS (For Command Vehicles)
Power to Weight Ratio	: 21 HP/T		
Maximum Road Speed	: 65 kmph		
Maximum Speed in Static Water	: 7 kmph		
Vertical Obstacle	: 0.7 M		
Trench Crossing	: 2.5 M		



# ARMoured AMBULANCE TRACKED VEHICLE

Armoured Ambulance Tracked Vehicle (AATV) is a variant of BMP-II and essentially built on "Sarath" chassis. Indigenously designed by CVRDE, it is being manufactured at Ordnance Factory Medak. It is equipped with all emergency medical equipments for speedy evacuation of battle field casualties.



## SPECIFICATIONS

Combat loaded mass	: 14 ton + 2%
Overall Length	: 6735 mm
Overall width	: 3150 mm
Overall height	: 2600 mm
Maximum Road Speed	: 65 kmph
Maximum Speed in Static Water	: 7 Kmph
Engine power	: 300 HP
Power to Weight Ratio	: 21 HP/T
Vertical Obstacle	: 0.7 M
Trench Crossing	: 2.5 M
Gradient	: 35°

### Personnel capacity:

Driver, Commander/ Medical officer +2 medical attendants, 8 sitting patients or 4 laying patients.

### Medical Equipments:

Defibrillator with NIBP, Transport Ventilator, Suction unit, Splints & Crammers, D.C- Refrigerator, Oxygen cylinders (2No.), Kidney Tray and Pillows & Blankets

Air conditioning system : 3TR with Dedicated APU

Communication : TADIRAN(External), DCH(Internal)

Navigation : GPS& GPK-59

# CARRIER MORTAR TRACKED

CMT Vehicle is based on BMP-II Chassis. This turret less version has 81mm mortar mounted on the modified troop compartment. The mortar is fired through an opening in the hull roof that has two hinged doors. The stowage capacity is 108 rounds.



## SPECIFICATIONS

Combat loaded mass	: 14 ton + 2%	Stowage capacity of Mortar	: 108 Rounds
Personnel capacity	: 6 persons	Navigation	: GPK-59 and GPS
Overall Length	: 6735 mm	Communication	: TADIRAN (External), DCH (Internal)
Overall Width	: 3150 mm		
Overall Height	: 2350 mm		
Engine power	: 300 Hp		
Maximum speed	: 65 Kmph		
Cross country	: 40 Kmph		
Weapon systems	: 81mm Mortar Launcher & 7.62mm MAG Gun		

# NBC-RV

Designed to meet the tactical requirements of Military Engineers for carrying out Nuclear, Biological & Chemical Contamination survey. Eleven sophisticated instruments fitted in the vehicle provide the real time data of contamination to Engineers.



## SPECIFICATIONS

Combat loaded mass	: 15 Ton + 1.5%	Trench Crossing	: 2.5 M
Personnel capacity	: 6 persons	Gradient	: 35°
Overall Length	: 6735 mm	Automatic Gun	: 2A42, 30mm Calibre
Overall Width	: 3555 mm	Coaxial Machine Gun	: PKT 7.62 mm
Overall Height	: 2450 mm	Special Equipment	: NBC Equipment, Roetgen meter, Pocket Dosimeter, Portable Dose Rate Meter, solid State Anemo Meter, RPL Dosimeter, Portable Gas Chromatograph, RVD Kit, GID-3, Ruggedized Scooping Device, Picket Driving System and AC system
Engine power	: 300 HP		
Power to Weight Ratio	: 21 HP/T		
Maximum Road Speed	: 65 kmph		
Maximum Speed in Static Water	: 7 kmph		
Vertical Obstacle	: 0.7 M		

# AERV

The Armoured Engineer Reconnaissance Vehicle (AERV) is an Indian military engineering vehicle developed by VRDE (Vehicle Research and Development Establishment) and being manufactured at Ordnance Factory Medak. It is designed to carry out terrestrial and riverbed survey to facilitate construction of assault bridges across water obstacles in both offensive and defensive operations in plain, desert and riverine terrain. It is equipped with specialized equipments including: echo-sounder, water current meter, laser-range-finder and GPS. On the left rear of the hull, a marking system with 80 rods is fitted.



## SPECIFICATIONS

Combat loaded mass	: 13.4 ton + 2%
Personnel capacity	: 6 persons
Overall Length	: 6735 mm
Overall width	: 3555 mm
Overall Height	: 2450 mm
Coaxial Machine Gun	: PKT 7.62 mm
Navigation	: GPK-59 and ALNS MK-I
Communication	: TADIRAN (External), DCH(Internal)
Land Recce Instruments	: Digital Cone Penetrator ,LRF, Thermal sight ,Range & Angle measurement and Inclino Meter

Water Recce Instruments : Echo Sounder ,Water Current Meter , Electronic Distance Meter, Hand Held Water Current Meter and Water Depth Measuring Device

Air Conditioning System : 1.5 Ton

# CCPT

CCPT is designed and developed for accomplishing all tactical / technical fire control functions to achieve effective deployment of Self-Propelled (SP) Artillery guns. It is the first of its kind with tracked chassis housing Artillery Combat Command and Control Systems (ACCCS) for accomplishing fire control functions of all the versions of Artillery guns, both towed & self-propelled versions. The CCPT is a re-engineered BMP vehicle with an extended chassis and additional bogie wheels. CCPT serves as a common platform for command post functions of all the Indian Artillery guns.



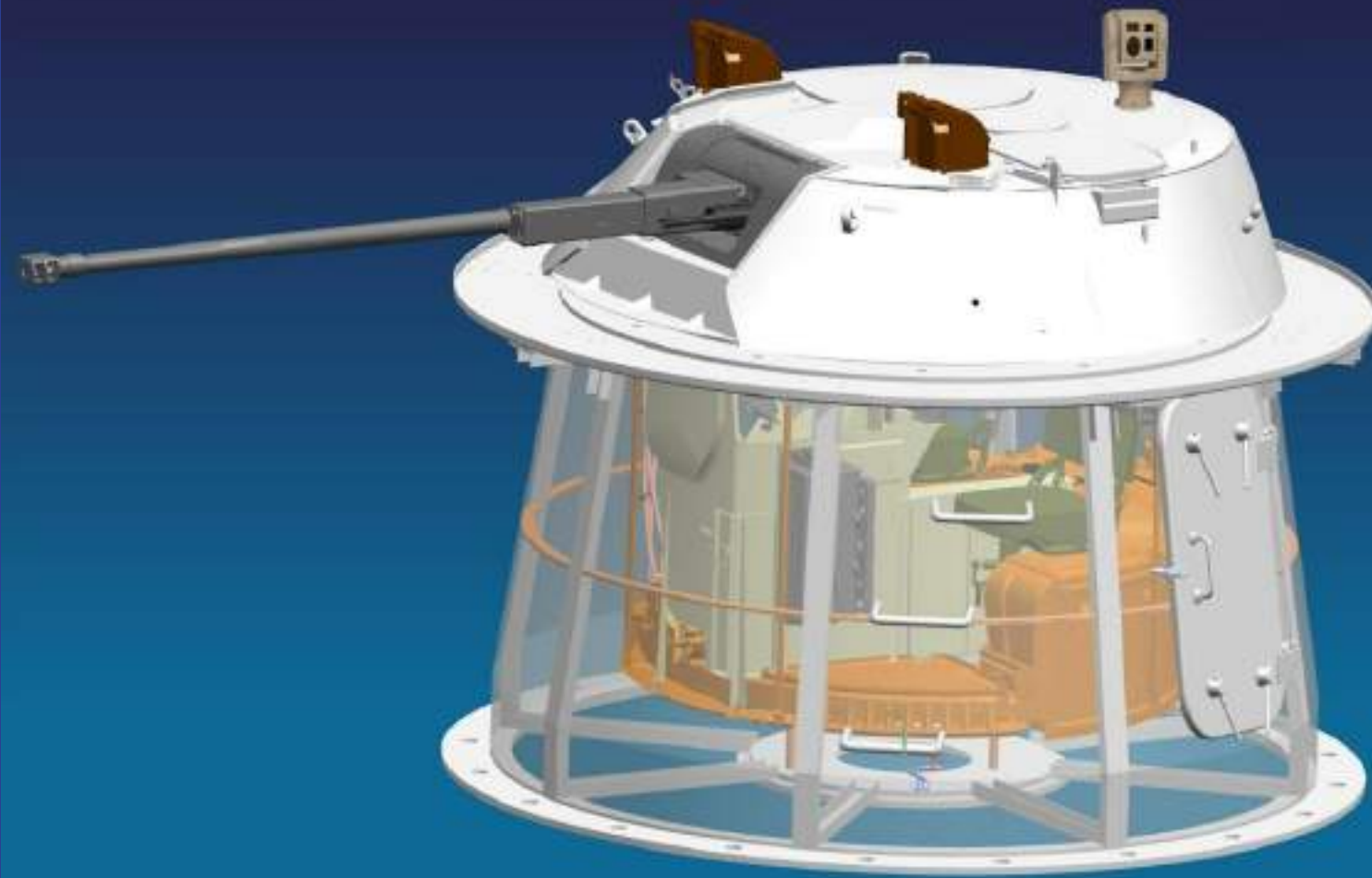
## SPECIFICATIONS

Combat loaded mass	: 16.7 Ton + 2%
Personnel capacity	: 8 Persons
Overall Length	: 7390 mm
Overall width	: 3120 mm
Overall Height	: 2430 mm
Armament	: 7.62 mm MAG Gun

Navigation	: GPK-59 and GPS
Special Equipment	: Integrated Command Control and Communication system for Artillery Tracked (i3CAT) and AC system

# CRN-91 GUN

The Close Range Naval-91 is a naval version of the Medak 30mm automatic gun installed on a ship. It is manufactured by the Ordnance Factory Medak. The CRN-91 Naval gun is a gyro stabilized and is directed by electro-optic fire-control system (FCS) for day and night use, mounted on an improvised cupola. It can also be remotely operated.



## SPECIFICATIONS

Calibre	: 30 mm	Ammunition	: HE Tracer, Practice, Incendiary, APT
Barrel Life	: 6000 rds (9000 rounds with over-hauling)	Stabilization Accuracy	: <1m Rad
Weight of the Gun	: < 2700 kg (Including mounting system)	Slewing Rate	: Traverse : > 30°/sec; Elevation : > 35°/Sec
Range (MER)	: For APT 2 km, For HE 4 km	Service Life	: 30years with services/ overhauling
Rate of Fire	: 550 Rds/Min	Cartridge	: Soviet Standard
Magazine capacity	: 500 rds( 160 APT + 340 HE)		

# MINE PROTECTED VEHICLE – 6x6

This vehicle is designed to provide unmatched protection to the soldiers in the battlefield. The superior blast and ballistic protection coupled with high powered mobility makes this vehicle a true combat armoured vehicle for soldiers.



## SPECIFICATIONS

- 320HP, BS-IV Diesel Engine generating peak torque of 1250N-m at 1200-1800 rpm
- 9 Forward and 1 reverse gear box along with Auxiliary gear box for 6x6 power train
- Specially designed V shaped hull for optimum mine blast resistance
- Blast attenuating seats for all crew members with 5 point seat belts for max safety in case of blasts.
- Self-recovery winch of 15 Ton Capacity.
- High capacity HVAC with individual ports for all crew members

- Rear view camera with night vision capability
- Heat insulated, pleasant interior for better comfort
- 4 nos remote operated rotating search lights
- All tyres fitted with Run Flat system

Payload	: 1500 kg
Max Speed	: 85 kmph
	0 to 45 kmph in 35 sec
Gradability	: 30°
Ground Clearance	: 335 mm
Range	: 500 km
Crew Capacity	: 10+2

# UPGRADED MINE PROTECTED VEHICLE

This MPV is upgraded version of erstwhile MPV 4X4. Major upgradation includes Mobility, HVAC, Rear View Camera, Self Recovery Winch, Rotating Search Lights and Power Operated Rear view Mirror.



## SPECIFICATIONS

- 220HP Diesel Engine generating peak torque of 800N-m at 1400 -1950 rpm
- 6 Forward and 1 reverse gear box along with Auxiliary gear box for 4x4 power train
- Specially designed V shaped hull for optimum mine blast resistance
- Self-recovery winch of 10 Ton Capacity.
- Rear view camera with night vision capability
- 4 nos remote operated rotating search lights
- All tyres fitted with Run Flat system

Payload	: 1500 kg
Crew Capacity	: 10+2
Max Speed	: 85 kmph
	0 to 45 Kmph in 25 sec
Gradability	: 30°
Ground Clearance	: 305 mm
Range	: 750 km



# LPTA 715

It is an in-service vehicle of Indian Army which is being produced at Vehicle Factory Jabalpur since 1998. More than 51000 LPTA trucks have been supplied to Armed Forces by Vehicle Factory Jabalpur which in itself speaks volumes about the quality and reliability that this vehicle offers in 2.5T weight category.



## SPECIFICATIONS

- 155 HP Diesel Engine generating Peak Torque of 590 N-m at 1500 Rpm
- 6 Forward and one reverse gear box along with Auxiliary Gear Box for 4X4 power train
- Differential lock for better off road performance
- Tiltable Cabin for ease of maintenance
- Blackout lighting for blackout driving conditions
- Cold starting device for high altitude operation
- Option of Cross Country or Sand cum High Tyres

Payload	: 2500 kg
Max. Speed	: 100 kmph
Gradeability	: 31.5 deg
Ground Clearance	: 300mm

# BULLET PROOF VEHICLES

This is a specially designed bullet proof version of the TATA-407 troop carrier to ensure protection of Armed Forces against small arms.



## SPECIFICATIONS

### **BULLET PROOF TATA 407**

- Basic Platform: TATA-407 Troop Carrier.
- Ballistic protection
- Underbelly protection against HE grenades.
- Payload : 1000 kg
- Crew Capacity : 10 + 2
- Fitted with Spall Liner throughout the cabin for improved ballistic protection
- Provision of rotary turret with weapon mounting arrangement and gun ports for all crew members for counter-fire.
- Fitted with Run Flat System for all around ballistic protection

### **BULLET PROOF SML 4 X4**

- Basic Platform : SML 4x4 Troop Carrier
- Ballistic Protection
- Under belly protection against HE grenades
- Payload : 1000 kg
- Crew capacity : 10 + 2
- Fitted with Spall liner throughout the Cabin for improved ballistic Protection
- Provision of Rotary Turret with Weapon Mounting arrangement and Gun ports for all Crew members for Counter-fire
- Fitted with Run Flat System for all around Ballistic Protection.

# STALLION MK-IV

It is an in-service vehicle of Indian Army which is being produced at Vehicle Factory Jabalpur since 1998. More than 65000 Stallion Vehicles have been supplied to Armed Forces by Vehicle Factory Jabalpur (VFJ) which in itself speaks volumes about the quality and reliability that this vehicle offers in 5/7.5T weight category.



## SPECIFICATIONS

- 180 HP Diesel Engine Generating Peak Torque of 657 N – m at 1300 –1600 Rpm.
- 6 Forward and one reverse gear box along with Auxiliary Gear Box for 4x4 Power Train.
- Differential lock for better Off Road Performance.
- Fully forward control type, Tilttable cabin for ease of maintenance.
- Provision of Sleeper Cabin.
- Blackout lighting for Blackout Driving Conditions.
- Cold starting device for High Altitude Operation.
- Option of Cross Country or Sand cum Highway Tyres.

Payload : 7500 kg (Max)

Max Speed : 85 Kmph

Gradeability : 25 deg

Ground Clearance : 305 mm

# SHARANG GUN

It is an upgraded version of in-service 130 mm Field Gun. The caliber of the gun has been upgraded from existing 130/46 mm to 155/45 mm. Besides caliber upgrade, the manual ammunition loading system of 130 mm gun has been mechanized by incorporating Ammunition Tray and Reamer Assembly which enhanced the operational efficiency of Artillery Regiment. VFJ has successfully delivered 26 SHARANG Guns to Indian Army, diversifying its product profile.



## SPECIFICATIONS

Calibre	: 155/45 mm
Maximum Range	: 39 KM
Rate of Fire	: 4-5 Round per Minute
Charge Type	: BMCS with 155 mm
Barrel life	: 1500 EFC

# 2KL WATER BOWSER

VFJ has Developed Water Bowser in order to provide hygiene water to armed forces operating at remote locations.



## SPECIFICATIONS

Base platform	: LPTA 2.5 Ton Chassis
Power	: 155 HP Diesel Engine
Water Capacity	: 2000 Ltrs of water over all kind of roads, terrains and high altitude
Tank Design	: Inner & Outer wall shell made of Special Grade Stainless Steel

- Temp variation not more than 5°C in 24 Hrs in extreme Temp Range of +50°C to -10°C.
  - No bacterial presence up to 72 hrs
- Discharge Pump : PTO operated

# KITHCEN CONTAINER

Cooking and serving hygiene food for troops deployed on special operations under inclement weather is a major challenge. The mobile kitchen designed and developed by VFJ offers a comprehensive solution to all such problems.



## SPECIFICATIONS

- Base platform : STALLION Chassis
- Designed to cook food for 150 -200 troops at time
- LPG Gas burners : 3No
- Electric Heated Hot Plate and Burner
- Hot oven of 1000 Watts Rating
- Water Tank : Stainless Steel Tank with 600 Ltrs Capacity
- Double Door Deep Freezer of 300 Ltr Capacity
- Water Cooler of 100 Ltr Capacity
- 4 No. of Heavy Duty Exhaust fans
- Portable Gen Set 6.5 KVA
- Heat Insulation Around entire Kitchen Cabin
- Fire Extinguisher and Insect trapper

# CHAFF DECOY LAUNCHER- KAVACH

KAVACH system is designed to counter the threats of various anti-ship missiles by using Chaff Decoys for optimum anti-missile defence technique. The system provides soft kill defence in three layered defence scheme.



## SPECIFICATIONS

- Multi barrel Chaff Rocket Launcher
- Trainable limits :  $\pm 180^\circ$  at rate of  $60^\circ/\text{Sec}$
- Elevation limits :  $0-60^\circ$  at rate of  $60^\circ/\text{Sec}$
- Configuration of launcher : 4X4 Barrel
- Modes of operation : Confusion ,Distraction and Seduction
- Compensation : Pitch, Roll & Yaw
- Accepting, Analysing, Prioritising 5 Threats

### LRMR LAUNCHER

Overall weight : 1680Kgs

Overall height : 2690  
Overall width : 1300 mm  
Overall length : 1300mm  
Mode of operation : Power & Manual  
Bore of barrel :  $105.6+0.4$  mm

### SR LAUNCHER

Overall weight : 1680Kgs  
Overall height : 2690  
Overall width : 1300 mm  
Overall length : 1300mm  
Mode of operation : Power & Manual  
Bore of barrel :  $98.6+0.4$  mm

# UTD-20 ENGINE FOR BMP-2

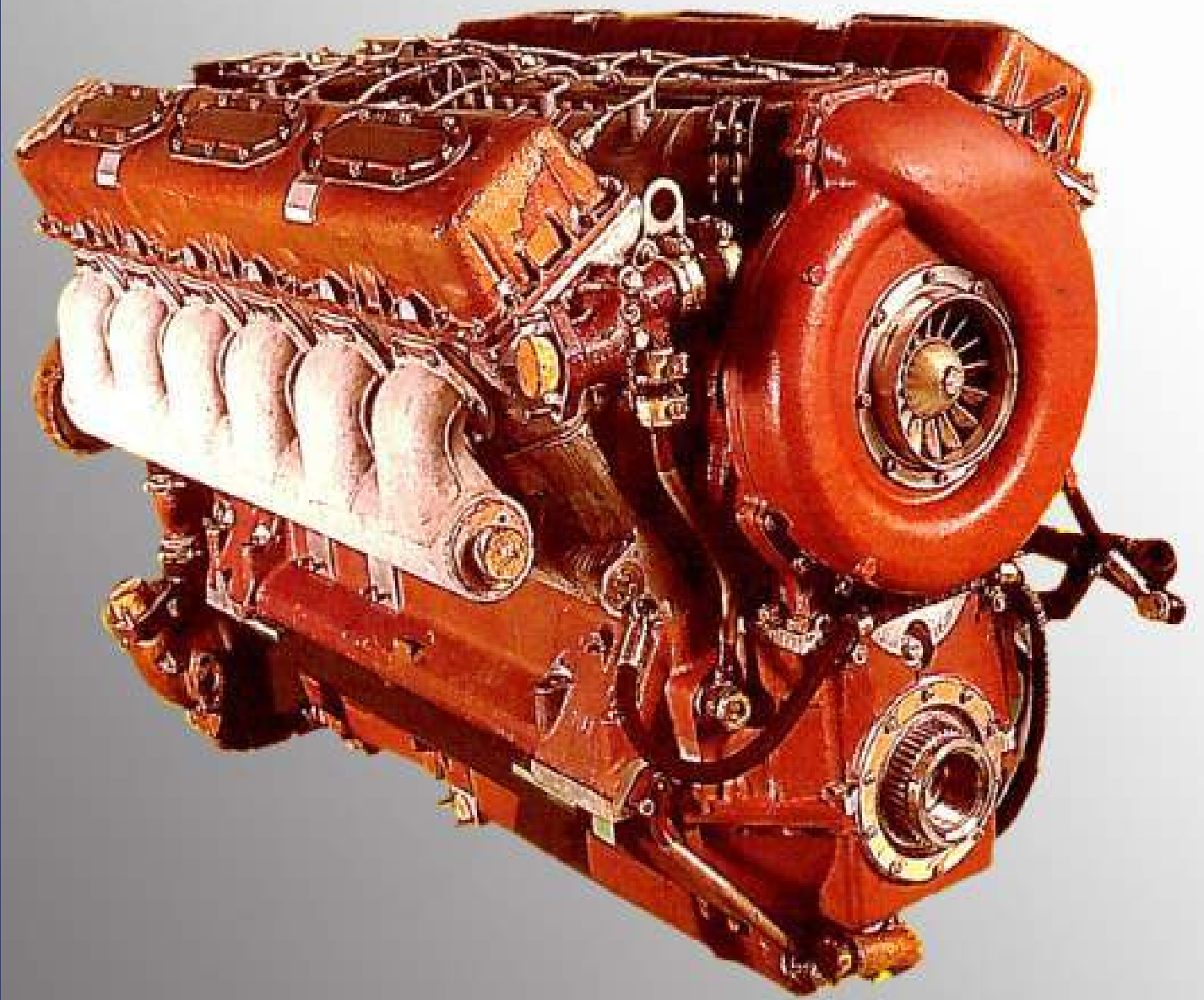


## SPECIFICATIONS

Technology/Type	: Naturally Aspirated, 6 Cylinder V-Type 120°, Water cooled, diesel engine	Compression Ratio	: 15.8
Power rating	: 300Hp@2600RPM	Weight	: 665 Kgs
Maximum Torque	: 100 Kg.f.m @1500 -1600 RPM	Engine dimension	: Lenght -834 mm Width -1150 mm Height -757mm
Bore/Stroke	: 150/150mm	Fuel	: Diesel (LSHF)
Specific fuel consumption	: 178 gm/Hp.hr	Vehicle	: BMP-2, Armoured Personnel Carrier, Heavy Trucks
Starting system	: Compressed air/Electric		
Power to weight	: 0.32 Kw/Kg		



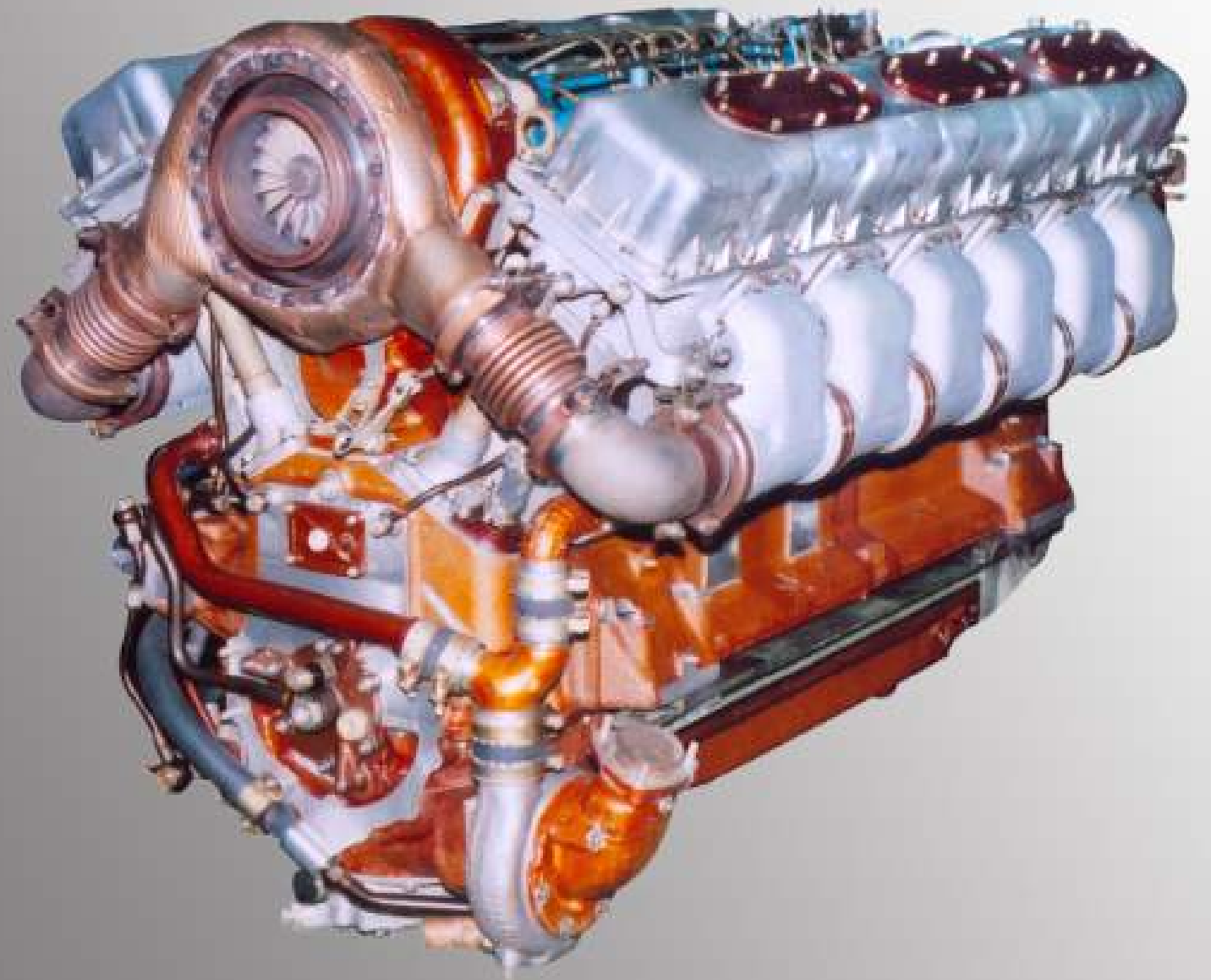
# V46-6 Engine FOR T-72



## SPECIFICATIONS

Technology/Type	: Multi-Fuel, 12 Cylinder V-Type 60°, Water cooled super charged diesel engine	Power to weight	: 0.59 Kw/Kg
Power rating	: 780 Hp@2000RPM	Compression Ratio	: 14
Maximum Torque	: 315 Kg.f.m @1300 -1400 RPM	Weight	: 980 Kgs
Bore/Stroke	: 150/180mm	Engine dimension	: Length -1480 mm Width -896 mm Height -903 mm
Specific fuel consumption	: 180 gm /Hp.hr	Fuel	: Diesel (LSHF), Petrol Kerosene
Starting system	: Compressed air /Electric	Vehicle	: T-72 Tank, Trawl, ARV

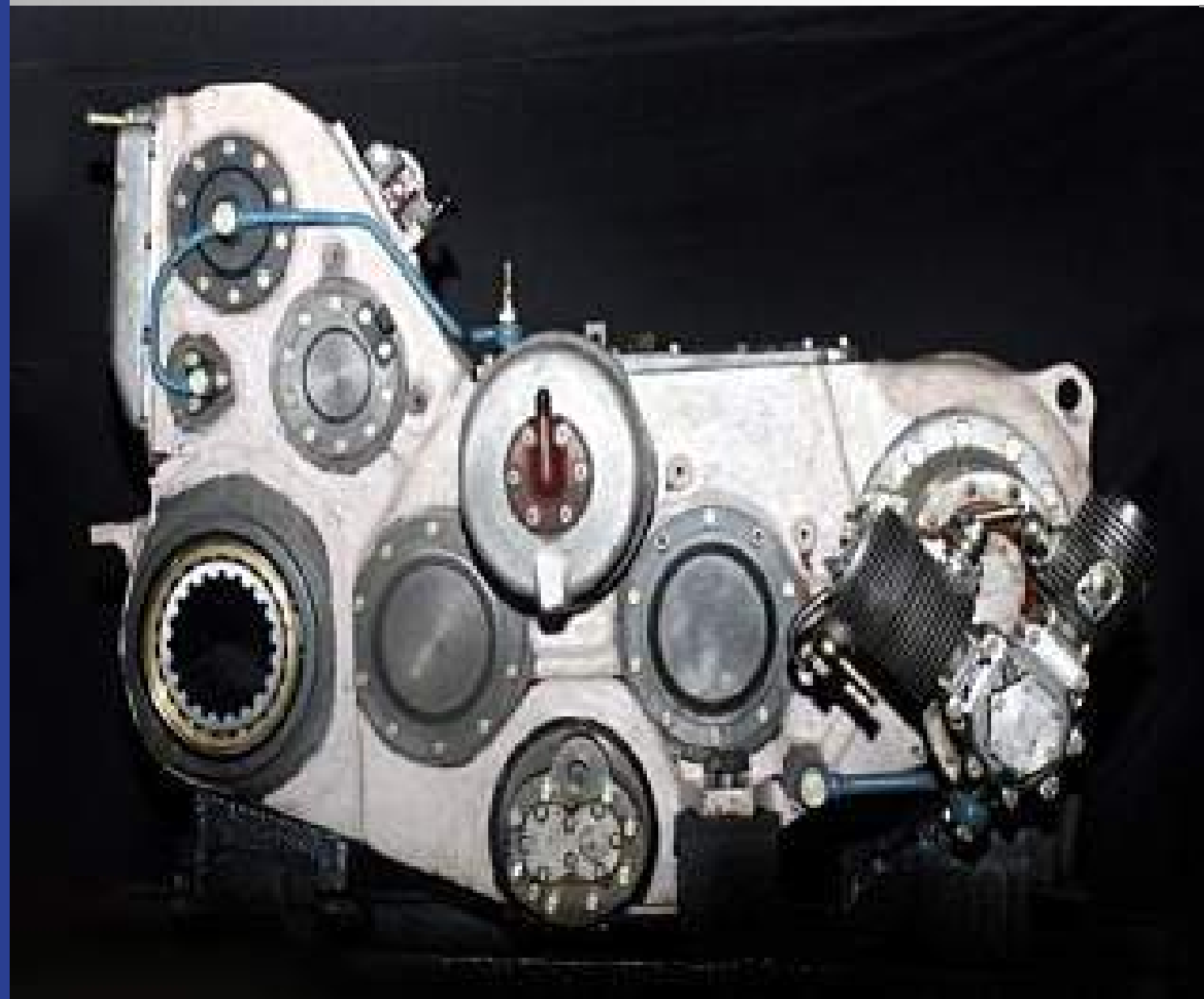
# V92S2 ENGINE FOR T-90



## SPECIFICATIONS

Technology/Type	: Multi-Fuel, 12 Cylinder "V" Type 60, Water cooled, Turbo charged, diesel engine.	Compression ratio	: 14
Power rating	: 735 Kw/1000hp @ 2000 RPM	Weight	: 1050 Kgs
Maximum Torque	: 400 Kg.f.m @ 1300 -1400 RPM	Engine dimension	: Length: 1466 mm – Width: 896 mm – Height: 903 mm
Bore / Stroke	: 150/180 mm	Fuel	: Diesel (LSHF), Kerosene
Specific fuel consumption	: 212 gm /Hp.hr (156 gm / Kw.hr)	Vehicle	: T-90 (Bhishma Battle Tank)
Starting system	: Compressed air/Electric		
Power to weight	: 0.7 : 1 Kw/Kg		

# INTERMEDIATE GEAR BOX –FOR MBTs



## SPECIFICATIONS

- Transmit torque from engine to right and left Final Gear Boxes.
- Drives the aviation compressor.
- Starts the engine during starter mode and rotates generator during generator mode.
- Rotates fan drive unit.3
- Weight : 310 Kgs.
- Rotates suction pump for scavenging transmission oil from IGB.

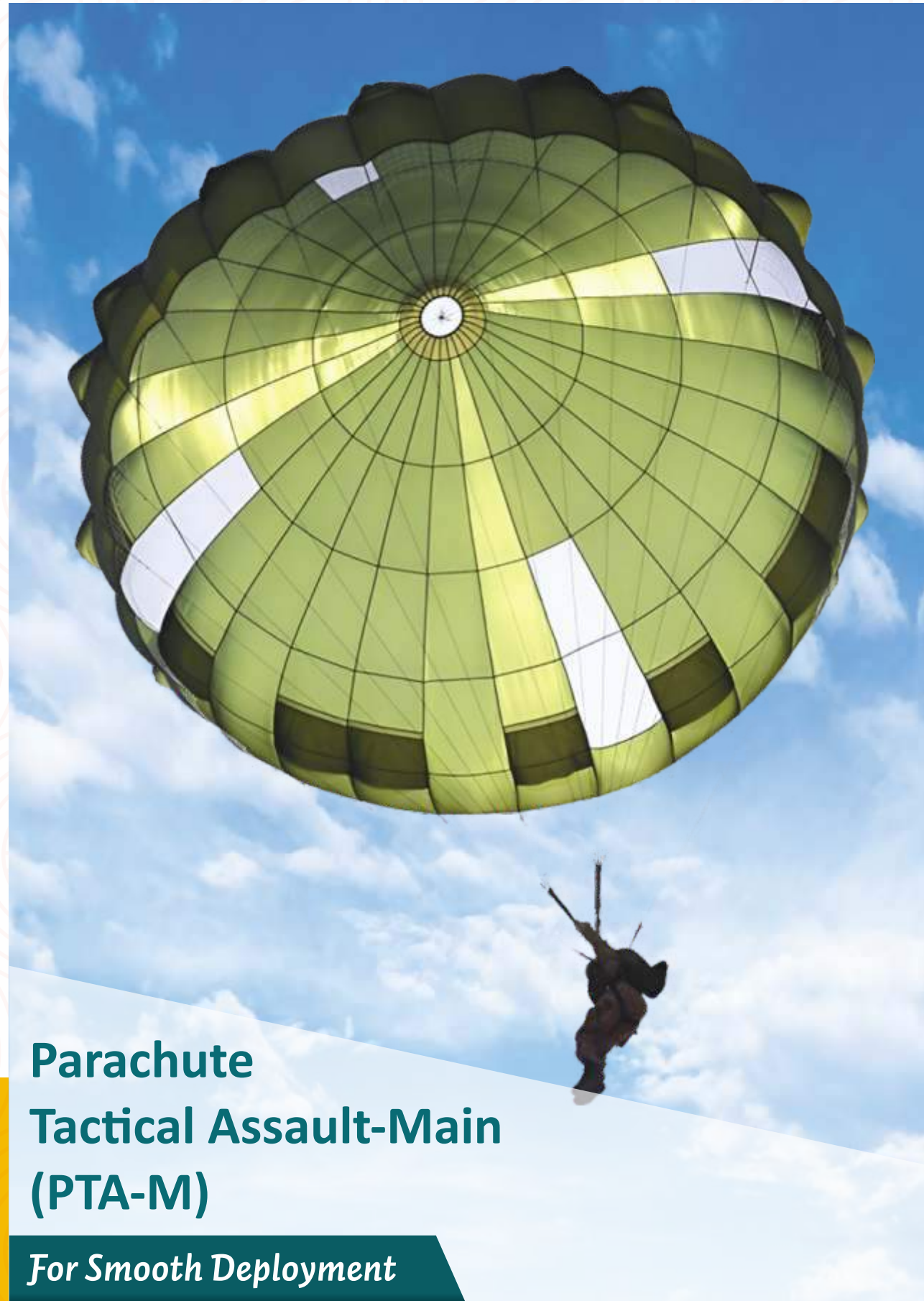
## APPLICATION

- Bhisma Tanks (T-90)
- Ajeya Tank (T-72)
- Bridge Layer Tank (BLT)
- Trawl



# MAN CARRYING PARACHUTES





## Parachute Tactical Assault-Main (PTA-M)

*For Smooth Deployment*



## Parachute Tactical Assault-Main (PTA-M)



### INTRODUCTION

The Parachute Tactical Assault – Main (PTA-M) has been developed for tactical military assault applications and for normal training purposes. The canopy is aero conical in shape which helps in avoiding post-inflation collapses and having 8 m flying dia. It has 16 air scoops for quick inflation of the canopy, 4 slits covered with net which helps in oscillation free descent and is provided with a anti-inversion net at the periphery to avoid malfunction like inversion/line over/blown periphery of the canopy. The parachute assembly consist of canopy, a bag inner for stowing the canopy, a pack outer which holds the canopy and bag inner in position and a 3-point attachment fully adjustable harness for comfortable wearing of the parachute by the jumper and a Carrying Bag.

### SPECIFICATIONS

Max. Deployment Speed	:	140 Knots
Drop Altitude	:	300 ft. AGL (Min.)/15,000 ft AMSL (Max.)
Max. Payload	:	150 kg
Rate of Descent	:	18 ft/sec.
Opening Time	:	2.5 to 3 sec.
Shock Load	:	Less than 5 g
Weight of Parachute Assembly	:	14.00 kg
Parachute Diameter	:	8 m
Design of Canopy	:	Aero conical
No. of Rigging Lines	:	28
No. of Gore	:	28
Life of Parachute	:	13 years or 100 jumps or whichever is earlier





## Parachute Tactical Assault–Reserve (PTA-R)

*For Emergency Escape*

## Parachute Tactical Assault-Reserve (PTA-R)



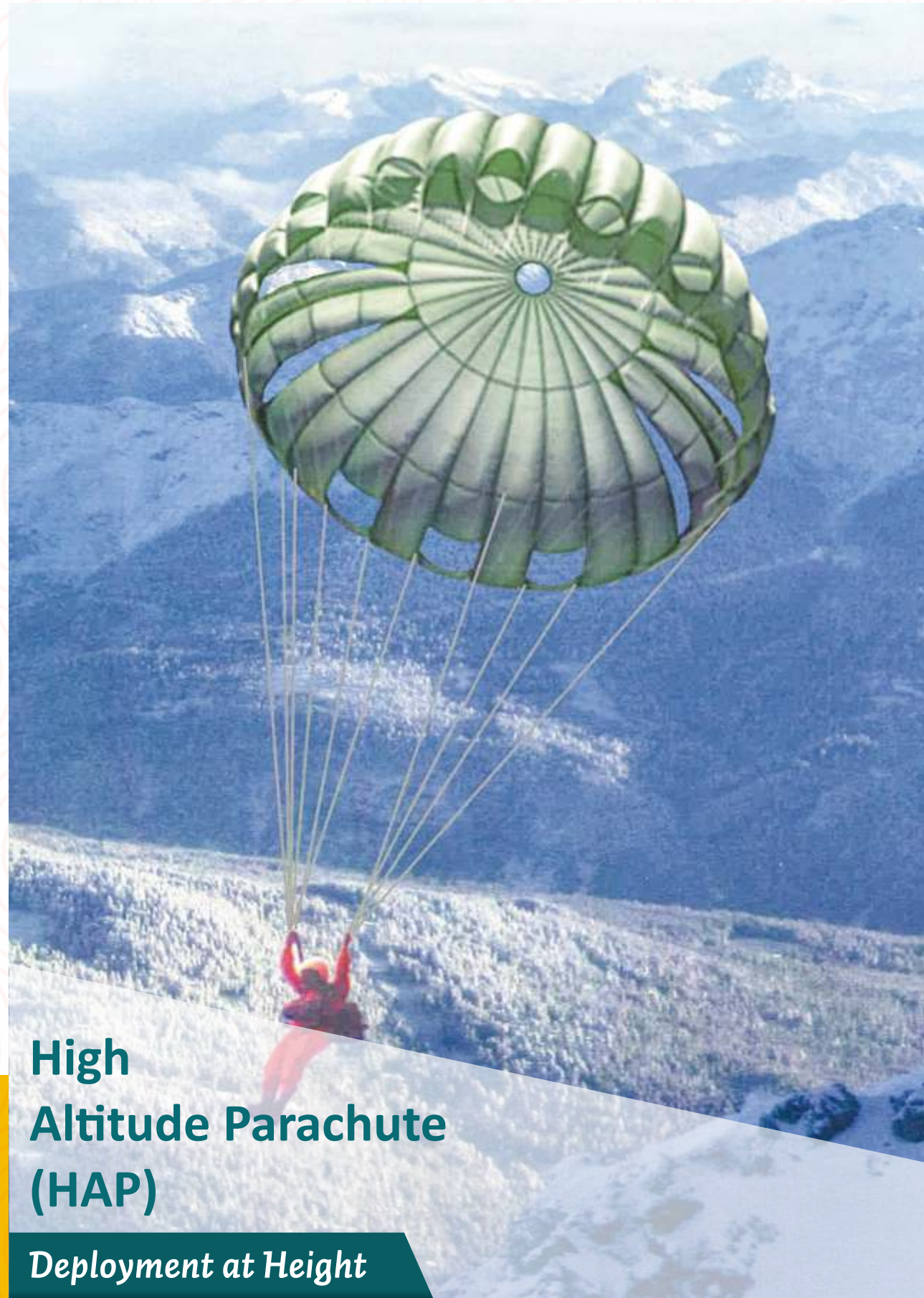
### INTRODUCTION

The Parachute Tactical Assault–Reserve (PTA-R) has been developed for use during tactical military assault applications in conjunction with the PTA-M main parachute. This parachute assembly consists of a 7.0 m dia. Canopy flat circular in shape, a pack cover, a deployment spring and a pilot parachute. The parachute assembly, weighing 6.5 kg is designed for attaching at the chest harness rings for manual operation with the rip cord handle provided at the right side.

### SPECIFICATIONS

Max. Deployment Speed	:	150 knots
Drop Altitude	:	300 ft. AGL (Min.)/15,000 ft AMSL (Max.)
Max. Payload	:	130 kg
Rate of Descent	:	24.6 ft/sec.
Opening Time	:	2.5 sec.
Weight of Parachute Assembly	:	6.5 kg
Parachute Diameter	:	7 m
Design of Canopy	:	Flat, Circular
No. of Rigging Lines	:	20
No. of Gore	:	20
Life of Parachute	:	13 years or one Emergency Escape whichever is earlier





## High Altitude Parachute (HAP)

Deployment at Height

## High Altitude Parachute (HAP)



### INTRODUCTION

The High Altitude Parachute (HAP) assembly has been designed for use during Para trooping operation and normal para-jump training from transport aircraft. This is a single stage static line parachute for high altitude and normal jump. The parachute assembly consist of canopy, a bag inner for stowing the canopy, a pack outer which holds the canopy and bag inner in position and a 3-point attachment fully adjustable harness for comfortable wearing of the parachute by the jumper and a Carrying Bag. The canopy having nominal dia. of 10.66 m is steerable with a 2 T openings on gores no. 4, 5, 6 and 26,27,28 which helps in braking and steering during descent.

### SPECIFICATIONS

Max. Deployment Speed	: Up to 129.59 Knots
Drop Altitude	: 750 ft. AMSL(Min.) / 15,000 ft AMSL(Max.)
Max. Payload	: 120 kg
Rate of Descent	: 16-18 ft/sec.
Opening Time	: 2.5 to 3 sec.
Shock Load	: Less than 5 g
Weight of Parachute Assembly	: 15.00 kg (Approx.)
Parachute Diameter	: 10.66 m
Design of Canopy	: Parabolic
No. of Rigging Lines	: 30
No. of Gore	: 30
Life of Parachute	: 13 years or 100 jumps whichever is earlier





## Parachute Tactical Assault–Gajraj (PTA-G2)

*Advance Personnel Parachute*

## Parachute Tactical Assault Gajraj (PTA-G2)



### INTRODUCTION

The Parachute Tactical Assault–Gajraj i.e. PTA (G2) is an advance version of existing PTA (G) personnel parachutes system. The proposed parachute system will enhance the capability of paratroopers in term of deployment velocity and deployment altitude. In existing parachute system, the paratrooper can be deployed up to speed of 400 kmph keeping maximum shock value within permissible limit. This parachute system can be used by paratroopers in airborne operations both for normal & high altitude drop zones. PTA G2 comprises of both main and reserve parachute and system is equipped with AAD(PPKU).

### SPECIFICATIONS

Max. Deployment Speed	: 216 Knots
Drop Altitude	: 1476 ft AGL- 16404 ft AMSL
Max. Payload	: 140 kg
Rate of Descent	: 18 ft/sec. @140 kg
Steerability	: Steering 360 in either direction via control toggles
Opening Time	: 2-3 Sec.
Shock Load	: Less than 5g
Weight of Main Parachute Assembly	: 13.5 kg (Static line operation) & 14.5 kg (AAD)
Parachute Diameter	: 100 m <sup>2</sup>
Design of Canopy	: Toroidal
No. of Rigging Lines	: 24 to 2 Control Lines
No. of Gore	: 24
Life of Parachute	: 15 years or 100 Jumps Whichever is earlier







## Military Combat Parachute System (Under Development)

*Manoeuvrable & Light Weight MCPS*



## Military Combat Parachute System (Under Development)



### INTRODUCTION

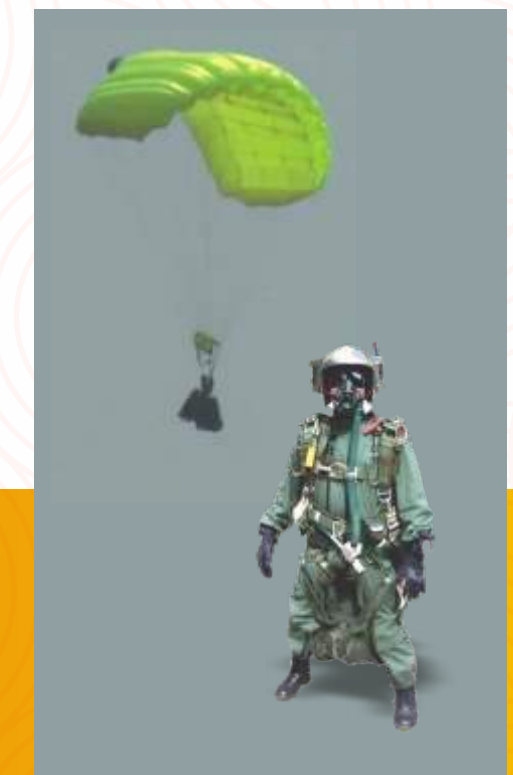
Military Combat Parachute System provides complete solution for military free fall application. MCPS features significant advancement over exiting system especially in terms of glide ratio, manoeuvrability, light weight and payload carrying capacity. The system consists of 9-cell semi-elliptical Ram Air Parachute, state-of-the-art Oxygen System, programmable Para computer.

The MCPS system can be use in following modes

- High Altitude High Opening (HAHO): Jump from as high as 30,000 ft.
- High Altitude Medium Opening (HAMO): Jump from as high as 30,000 ft and opening anywhere up to 10,000 ft.
- High Altitude Low Opening (HALO): Jump from as high as 30,000 ft and opening anywhere between 9,000 ft – 5,000 ft The proposed system has high glide ratio i.e 4:1 and better manoeuvrability the parachutes can be flown through very large distances.

### SPECIFICATIONS

Max. Deployment Speed	: 150 Knots
Drop Altitude	: 2000 to 30000 ft
Max./Min. Payload	: 200/50 kg
Glide Ratio	: 4:1
Rate of Descent	: 11.5 ft/sec. @200 kg
Opening Time	: 3-4 sec.
Shock Load	: Less than
Weight of Parachute Assembly	: 22kg
Parachute Diameter/Area	: 34 m <sup>2</sup>
Design of Canopy	: Aerofoil
No. of Cells	: 9
Life of Parachute	: 12 years (Jump Life on condition basis)





# BRAKE PARACHUTES





## Brake Parachute for Sukhoi Aircraft (SU-30)



*Most Dependable Brake Parachute*

### INTRODUCTION

The Twin Canopy 'Brake Parachute' is intended to reduce the landing run length of Sukhoi Aircraft or during aborted take-off at air speeds of at least 180 kmph and not exceeding 300 kmph & it is used by Indian Air Force. An Auxiliary chute is also provided which is a square shape canopy having area 0.980 Sq.m with coil spring stitched inside permanently. The parachute is customisable for SU 30-MK1 or SU 30-MK2.



### SPECIFICATIONS

Deployment Speed	: 260 kmph (Normal), 300 kmph (Emergency)
Max. Mass of Parachute System	: 24 kg
Design of Canopy	: Uni-cross
Surface Area of Main Parachute	: 24 m <sup>2</sup> each (2 nos.)
Span of Main Parachute	: 6.850 m
Life of Parachute	: 55 Streaming or 10 years whichever is earlier





## Brake Parachute (HYBRID) for LCA (TEJAS) Aircraft



**Brake Parachute You Can Rely on**

### INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The main parachute is of Uni-cross design having an area of 17 m<sup>2</sup>. A spring loaded pilot chute has an area of 0.05 m<sup>2</sup> is provided for initiating the auxiliary parachute. An auxiliary parachute of squared shaped has an area of 0.90 m<sup>2</sup> is provided for pulling main parachute out of deployment bag.



### SPECIFICATIONS

Deployment Speed	: 285 kmph (Normal), 340 kmph (Emergency)
Max. Mass of Parachute System	: 10 kg
Design of Canopy	: Uni-Cross
Surface Area of Main Parachute	: 17 m <sup>2</sup>
Span of Main Parachute	: 5.750 m
Life of Parachute	: 45 Streaming or 8 years Whichever is earlier





# Brake Parachute for HAWK (AJT) Aircraft



*Brake Parachute You can Trust On*

## INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The shape of main parachute is Ring Slot and the area is 11.4 sqm. The auxiliary parachute of octagonal shape also provided to put into action the main parachute canopy.



## SPECIFICATIONS

Deployment Speed	: 296.32 kmph
Mass of Parachute System	: 6.0 ± 0.2 kg
Design of Canopy	: Ring Slot
Surface Area of Main Parachute	: 11.4 sqm
Normal Dia. of Main Parachute	: 3.82 m
Life of Parachute	: 45 Streaming or 8 years or Whichever is earlier





# Brake Parachute for Mirage-2000 Aircraft



*The Reliable One*

## INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The main parachute is of uni-cross design with each cross strip of nylon fabric, 105 g measuring 5.280 m x 1.40 m provides canopy area of 13.5 Sq. m. An Auxiliary parachute of 1.410 in dia. is also provided which has circular shape.



## SPECIFICATIONS

Deployment Speed	: 300 kmph (Normal), 390 kmph (Emergency)
Max. Mass of Parachute System	: 13.5 kg
Design of Canopy	: Uni-Cross
Surface Area of Canopy	: 13.5 m <sup>2</sup>
Span of Main Parachute of Canopy	: 5.28 m
Life of Parachute	: 40 Streaming or 8 years whichever is earlier





# Brake Parachute for MIG-21 Aircraft



**Brake Parachute You Can Rely on**

## INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The main parachute is of Uni-cross design having an area of 15.26 m<sup>2</sup>. An auxiliary parachute has an area of 1 m<sup>2</sup> intended for withdrawal of the system from the container and actuation of it.



## SPECIFICATIONS

Deployment Speed	: 180 kmph (Normal), 290 kmph (Emergency)
Mass of Parachute System	: 11 kg
Design of Canopy	: Uni-cross
Surface Area of Main Parachute	: 15.26 m <sup>2</sup>
Span of Main Parachute	: 5.45 m
Life of Parachute	: 45 Streaming or 10 years whichever is earlier





# Brake Parachute

## for MIG-29 Aircraft



**Reliability at Core**

### INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The main parachute is of Uni-crossdesign having an area of 14.4 m<sup>2</sup>. A pilot chute has an area of 0.05 m<sup>2</sup> consists of a bottom which mounts a side member with flaps, a sleeve and a spring has provided for initiating the auxiliary parachute. A Squared shape auxiliary parachute has an area of 0.95 m<sup>2</sup> intended for withdrawal of the system from the container and actuation of it.



### SPECIFICATIONS

Deployment Speed	: 180 kmph (Normal), 310 kmph(Emergency)
Mass of Parachute System	: 8.2 kg
Design of Canopy	: Uni-cross
Surface Area of Main Parachute	: 14.4 m <sup>2</sup>
Span of Main Parachute	: 5.30 m
Life of Parachute	: 55 Streaming or 10 years whichever is earlier







## Brake Parachute for Jaguar Aircraft



*Brake Parachute you can count on*

### INTRODUCTION

The brake parachute is intended to reduce the Aircraft landing run of the aircraft and provides additional safety during emergencies. The main parachute is of circular shape design having dia. of canopy 5.64m provides canopy area as 24 Sq. m. The auxiliary parachute of hexagonal shape also provided to put into action the main parachute canopy.



### SPECIFICATIONS

Deployment Speed	: 277 kmph (Normal), 333 kmph (Emergency)
Max. Mass of Parachute System	: 11.5 kg
Design of Canopy	: Circular Ribbon Type
Surface Area of Main Parachute	: 24 m <sup>2</sup>
Dia. of Main Parachute	: 5.64 m
Life of Parachute	: 40 Streaming or 10 Years whichever is earlier



# PILOT PARACHUTES





## Pilot Parachute PSU-36 for MIG 29 Aircraft

*Reliable Emergency Escape*



## Pilot Parachute PSU-36 for MIG 29 Aircraft



### INTRODUCTION

The Pilot Parachute PSU-36, is integral part of ejection seat used by pilot for ejection from the air craft during emergency for safe landing. The pilot parachute PSU-36 used for ejection seat fitted in Mig-29 aircraft. This parachute is intended to provide an avenue of escape for the pilot from disabled aircraft both over land and water. The canopy body is a polygon with a circumscribed circle of 8770 mm dia.

### SPECIFICATIONS

Max. Deployment Speed	: 650 kmph
Drop Altitude	: 6000 m
Max. Payload	: 138 kg
Rate of Descent	: 19-20 ft/sec.
Mass of Parachute System	: 12.5 kg
Canopy Area	: 60 m <sup>2</sup>
Max 'g' Valve	: 16 g
Design of Canopy	: Slotted Type (Polygon)
No. of rigging lines	: 28
Calendar life	: 10 years
Operational life	: One time use





## Aircrew Parachute Chest Type MK-I

*For Emergency Escape*

## Aircrew Parachute Chest Type MK-I



### INTRODUCTION

This assembly of parachute is used by Air Crew who occupy position in which it is not practicable to wear a parachute all the time. The Pack containing the Canopy and Auxiliary parachute is made detachable from the Harness and is kept in a prepared stowage, In case of an emergency it is hooked on to the Harness which is worn by the Crew all the time during flight. The assembly consists of 35 feet diameter Canopy extended skirt in shape which provides safe rate of descent even at high altitude terrain.

### SPECIFICATIONS

Max. Deployment Speed	: 100 to 160 knots
Drop Altitude	: 150 m AGL (Min.) / 7620 m AMSL (Max.)
Rate of Descent	: 16-17 ft/sec.
Canopy Area	: 89 m <sup>2</sup>
Mass of Parachute System	: 13.4 kg
Design of Canopy	: Extended Skirt
No. of Rigging Lines	: 30
Calendar Life	: 10 years
Operational Life	: One time use





## Pilot Parachute PSU-36 Series 4-3 for SU-30 Aircraft

*Avenue of Emergency Escape*



## Pilot Parachute PSU-36 Series 4-3 for SU-30 Aircraft



### INTRODUCTION

The pilot parachute PSU-36, Series 4-3 is integral part of the ejection seat fitted in Su-30 aircraft. This parachute is intended to provide an avenue of escape for the pilot from disabled aircraft both over land and water.

### SPECIFICATIONS

Max. Deployment Speed	: 650 kmph
Drop Altitude	: Upto 6000m (AGL)
Max. Payload	: 138 kg (Max.)
Rate of Descent	: 19-20 ft/sec
Canopy Area	: 60 m <sup>2</sup>
Mass of Parachute System	: <10 kg
Max. 'G' Value	: 16 kg (Max.)
Design of Canopy	: Slotted Type (Polygon)
No. of Rigging Lines	: 28
Calendar Life	: 8 Years
Operational Life	: One time use





**Clockwise**

**Anticlockwise**



## Stabilizing Parachute System SP-36



### INTRODUCTION

The ejection seat tries to tumble (pitch), roll and yaw after ejection due to various forces acting on the seat. If this motion is not controlled it results in total disorientation of the pilot and in extreme cases it may even result in fatalities. Hence, all the ejection seats have to be stabilized after ejection. The seat stabilizing parachute SP-36 Series II is an integral part of ejection seat K-36 DM. The revolving parachute along with telescopic stabilizing rod makes steady the ejection seat with the pilot along the entire path of the motion until the life saving parachute system begins to actuate.

### SPECIFICATIONS

Proper operation of the system at IAS	:	Upto 1400 km/h
The area of the canopy	:	0.06 to 0.076 Sq m (changes depending upon the speed at the time of ejection)
Time taken for auto-rotation at 800 km/h	:	0.1 second
Life of system	:	10 years
Weight of the system	:	170 ± 10 gm



## Stabilizing Parachute System SP-36



# SUPPLY DROP PARACHUTES





## Equipment Cargo Aerial Delivery Parachute Supply Dropping 8.5m

*Dropping of supplies*

## Equipment Cargo Aerial Delivery Parachute Supply Dropping 8.5m



### INTRODUCTION

The parachute having a skirt dia. of 8.5 m used for dropping of supplies with one container type SDM or with two container type SDB. This parachute is also used in cluster of two for heavy supplies dropping loads. A single parachute can be used for dropping the supplies from 135 kg to 160 kg. Pack cover is used for packing of the ECAD Parachute SD 8.5 m made with blended fabric.

### SPECIFICATIONS

Design of Canopy	:	Flat fully rigged
Skirt Dia. Of Canopy	:	8.5 m
No. Of Rigging lines	:	28
No. Of Gores	:	28 Gores
Life of Parachute system	:	10 years (Storage) or 2 drops whichever is earlier







## Heavy Drop Parachute System For An-32 Aircraft

*A Reliable Heavy Drop Parachute System*

## Heavy Drop Parachute System For An-32 Aircraft



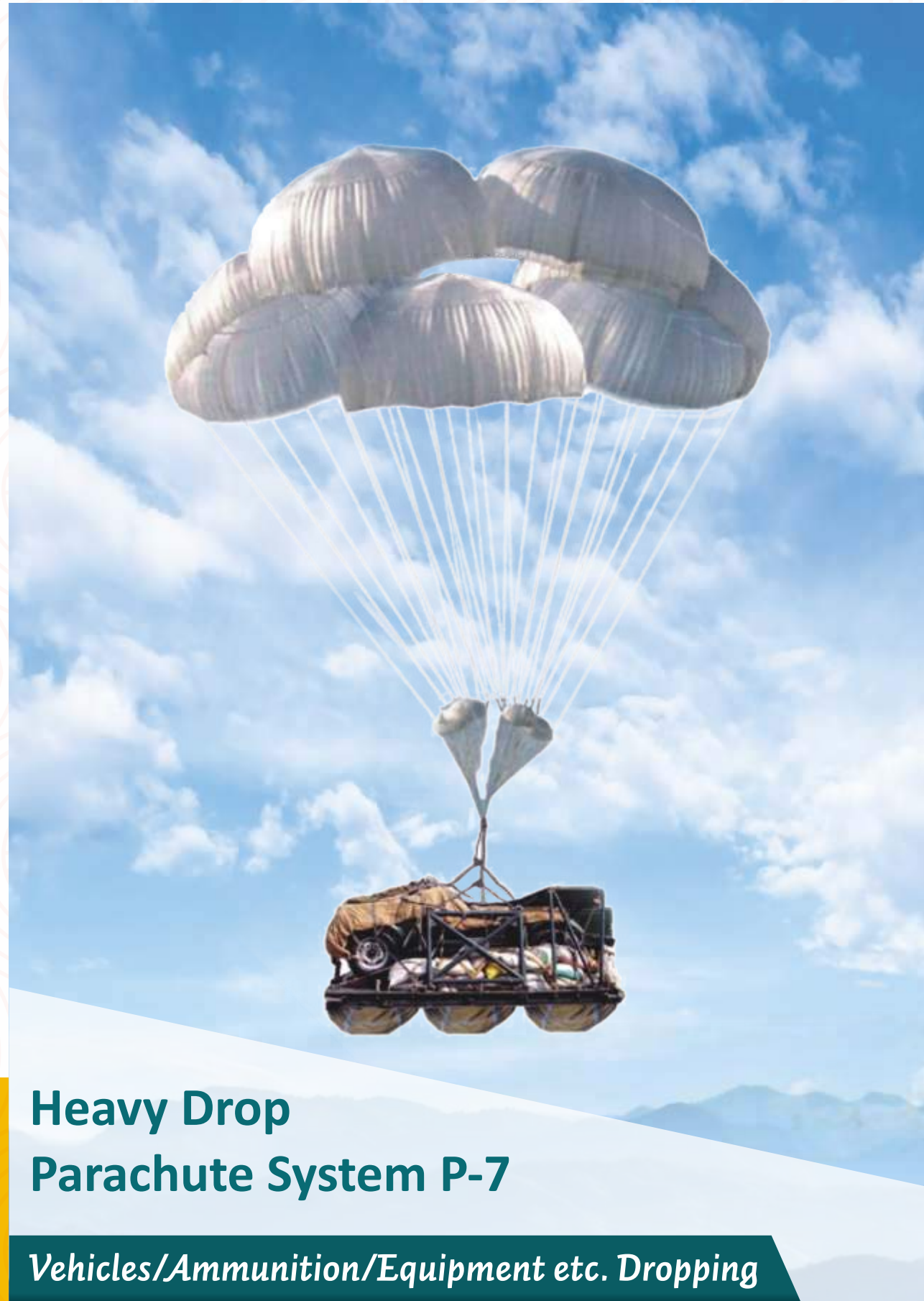
### INTRODUCTION

P-3 Heavy Drop parachute system is used for Para dropping of heavy equipment like jeep, jeep & trailer, jeep & RCL gun, 75/24 mm pack howitzer with ammunition etc. and also normal supply loads from this aircraft. The importance of these systems is realized when the target areas are inaccessible by roads. This system enables para dropping of military stores up to 3 tonnes from An-32 heavy lift aircraft.

### SPECIFICATIONS

Platform Size	:	4682 x 1869 x 116 mm
Max. Payload	:	3000 kg
Parachute System	:	Cluster of 05 main Parachutes
Mass of Platform	:	400 kg
Parachute System Weight	:	340 kg. (Approx.)
Drop Speed	:	190-240 km/h
Landing Speed	:	6-7 m/sec
Re-usability	:	5 times
Area of Main Canopy	:	350 m <sup>2</sup>
Drop Altitude	:	300-1500 m
Type of Aircraft	:	AN-32





## Heavy Drop Parachute System P-7

Vehicles/Ammunition/Equipment etc. Dropping



## Heavy Drop Parachute System P-7



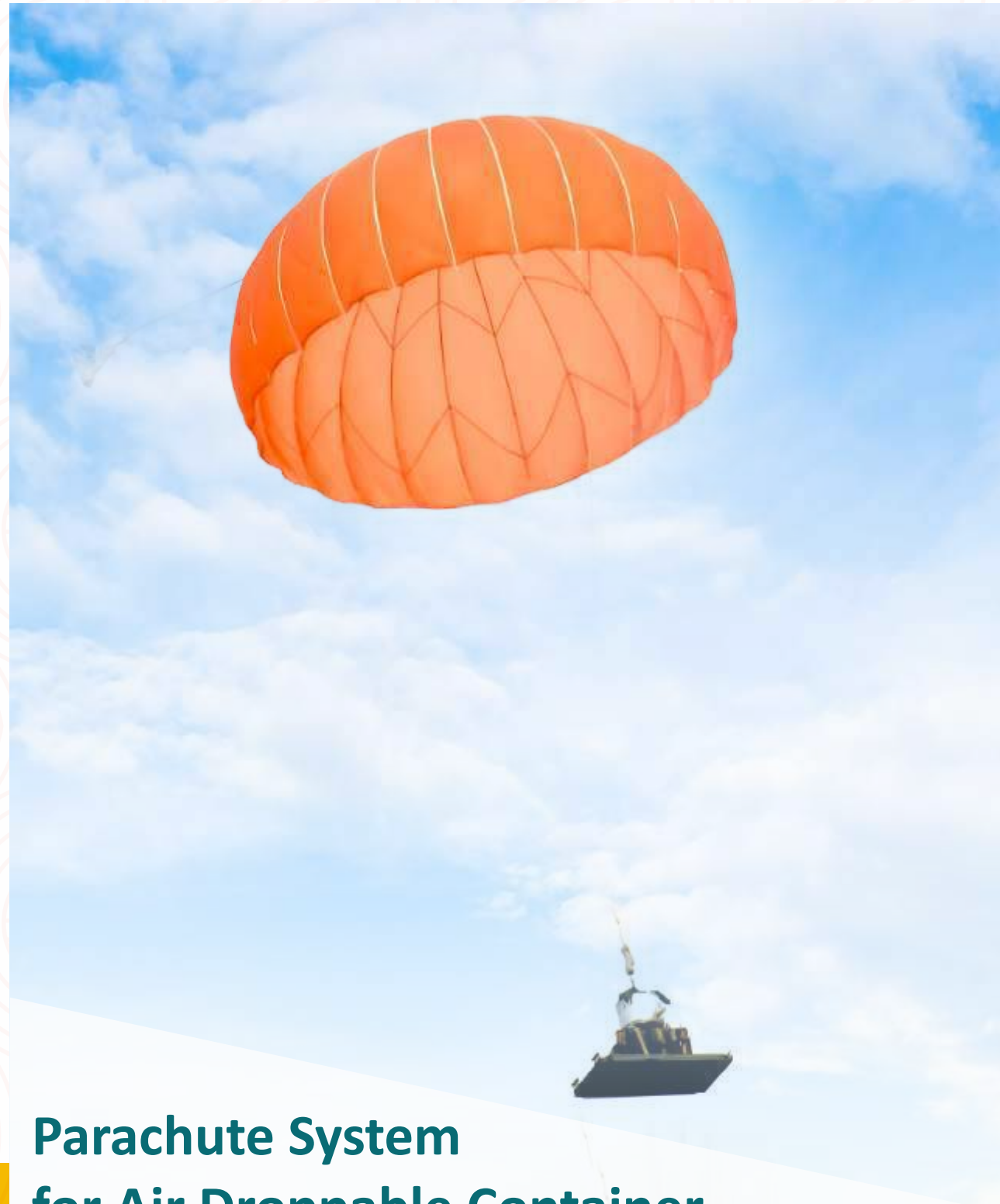
### INTRODUCTION

P-7 Heavy Drop Parachute System is used for Para drop of military stores (vehicles/ammunition/equipment) of 7 Ton weight class. The Heavy Drop (P-7) System for IL-76 Aircraft consists of a platform & parachute system. Parachute System comprises a cluster of 5 Main canopies, 5 Brake chutes, 2 Auxiliary chutes & 1 Extractor parachute. The platform is a metallic structure made up of Aluminium/Steel alloys. Shock absorption system & quick unlashng accessories.

### SPECIFICATIONS

Platform Size	:	4216 x 2602 x 193 mm
All Up Weight	:	8500 kg (Approx.)
Max. Payload	:	7000 kg
Parachute System	:	Cluster of 05 main parachutes
Platform Weight	:	1000 kg. (Approx.)
Parachute System Weight	:	650 kg. (Approx.)
Drop Speed	:	260-400 km/h
Landing Speed	:	7.8 m/sec
Re-usability	:	5 times
Area of Main Canopy	:	760 m <sup>2</sup>
Drop Altitude	:	500 m to 1500 m above landing site
Type of Aircraft	:	IL-76





## Parachute System for Air Droppable Container (ADC-150)

*Provide Rapid Logistic Support*

## Parachute System for Air Droppable Container (ADC-150)



### INTRODUCTION

Air droppable containers are required by Indian Navy to provide rapid logistic support to ships and submarines at sea during war as well as peace time. Parachute system for air droppable container that is used to mount on the rare of ADC is required to decelerate the carrier to the desired impact speed so that the impact load-due does not exceed its designed limit. It provides the platform for the designed carrier to land with safe speed without hampering the sensitivity of the items. The parachute system is designed to operate automatically after release of ADC-150 from the aircraft. Just after safe clearance from the aircraft, the R-4 cutter of 1 sec delay will be fired to activate the opening of parachute. In order to accomplish this task, a self-deployed parachute which is termed as Auxiliary Parachute of Dia 0.61 m is designed for the parachute system. A ring slot parachute (Ø2m) is designed as a drogue parachute for further reducing the speed & load impact of Container after being dropped from the aircraft to safe speed at which the deployment of main canopy can occur. A main parachute (Ø8m) is designed to safe landing speed of container into sea.

### SPECIFICATIONS

Container Size	:	Ø440 mm X 2416 mm long
All Up Weight	:	(AUW) 270 kg
Drop Speed	:	350-500 kmph
Landing Speed	:	11 m/s
Re-usability	:	Single use
Drop Altitude	:	305 to 3050 m
Aircraft	:	IL – 38 SD&P8I
Shelf Life	:	10 years (Storage)





# OTHER PARACHUTES



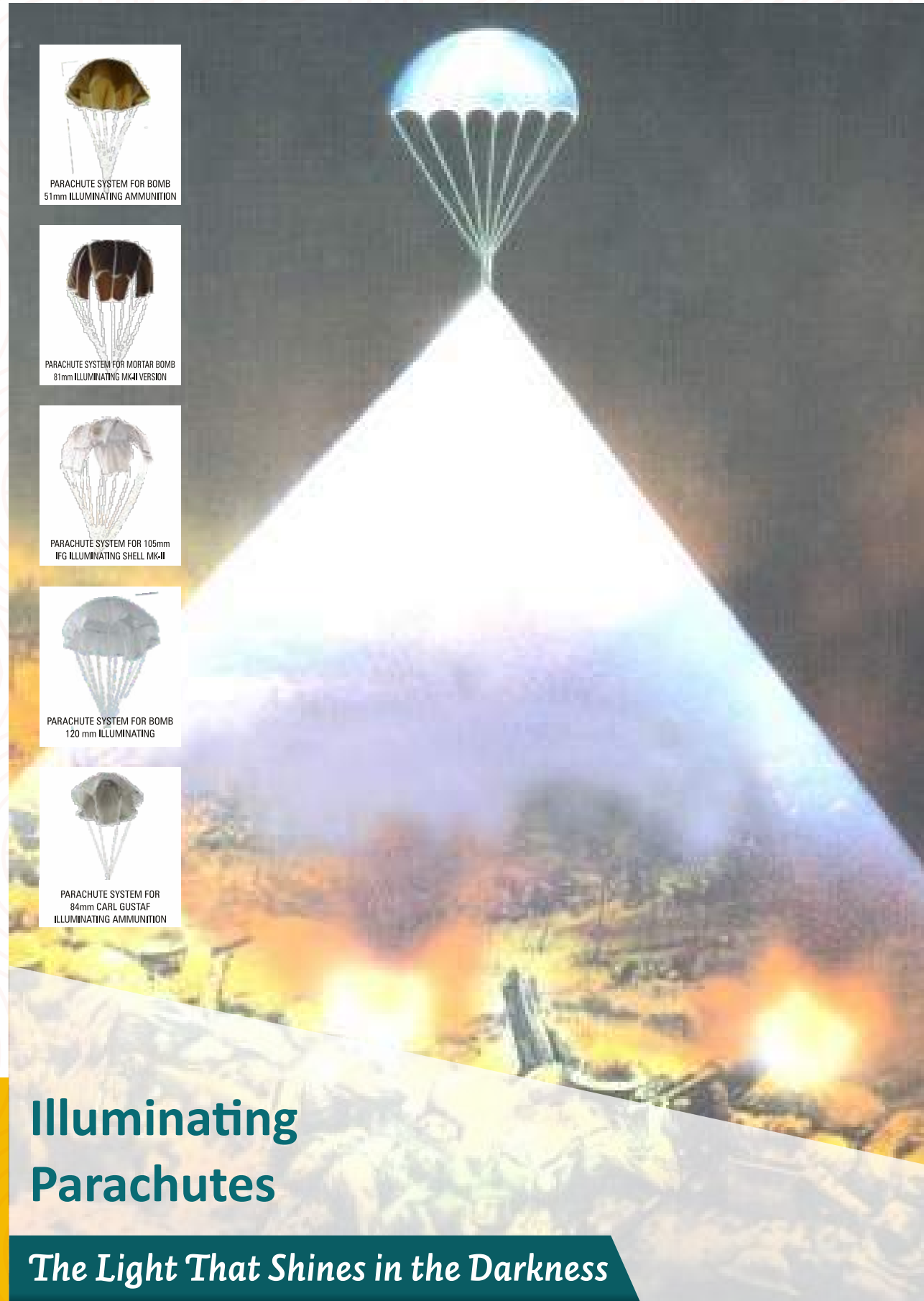
## Illuminating Parachutes

### INTRODUCTION

The illuminating parachutes are used to decelerate and to stabilise the speed of bombs and for a quick illumination of target area. These parachutes can also be used to provide complete battle field illumination. Used extensively to support night warfare. The illumination provided by these parachutes is sufficient for identification and engagement of all types moving and non-moving objects. The illumination will also help for movement of troops and location of enemy post and their movement.

### SPECIFICATIONS

Illuminating Parachute Category						
Parameters	51 mm	81 mm	84 mm	105 mm	120 mm	155 mm
Weight of Parachute (Approx.)	20 gm	100 gm	120 gm	360 gm	160 gm	400 gm
Auto Deployment	Fuze	Fuze	Fuze	Fuze	Fuze	Fuze
Candle Weight (Mass of Filled bomb/shell)	0.93 kg	3.85 kg	1.85 kg	15.5 kg	13.05 kg	43 kg
Rate of Descent	3-4 m/sec	Less than 5 m/sec	5 m/sec	Less Than 10 m/sec	NA	NA
Altitude of Opening	150 mtr	400-500 mtr (Approx.)	200 mtr (Approx.)	400-500 mtr (Approx.)	600 mtr (Approx.)	1200 mtr (Approx.)
No of Uses	Single Use	Single Use	Single Use	Single Use	Single Use	Single Use



## Illuminating Parachutes

*The Light That Shines in the Darkness*



## Parasail Assembly

*Best for Adventurous Aerosport*

## Parasail Assembly



### INTRODUCTION

This Parachute is for Parasailing which is an adventurous aero-sport. Para sailor along with the parasail parachute is pulled up into the air mechanically by a moving vehicle like a jeep. The canopy gets inflated and on further pulling it starts ascending in the air like a glider up to a certain height. At a predetermined height, the parachutist is disconnected from the rope and then it starts descending with the help of parachute as a Para-jumper. This parachute is also used to impart training of Para-trooping to NCC (Air Wing) cadets.

### SPECIFICATIONS

Weight of Parachute	:	4 kg
Diameter of Canopy	:	7100 mm (Approx.)
Payload	:	50-80 kg
Design of Canopy	:	Extended Skirt Type
No. of Rigging Lines	:	24
No. of Gore	:	24
Life of Parachute	:	07 years or 1500 Sailings whichever is earlier





## Drone Rescue Parachute

Reliable Parachutes for UAVs

## Drone Rescue Parachute



### INTRODUCTION

Drones are Unmanned Aerial Vehicles (UAVs) autonomously or remotely operated aircrafts, fly without on-board human pilot operated from the ground. Drones are used for entertainment, civilian applications, wildlife, remote sensing, surveying and photogrammetry, smart agriculture, disaster surveying and management, forestry, energy harvesting, and housing renovation, scientific applications, and military applications (surveillance and reconnaissance and attacking the enemy). During the flight drones may face a variety of problems internal (e.g., an electrical circuit failure, broken connection, or mechanical damage) and external (interference of an external obstacle such as birds or hostile force) and drones can become unmanageable, fall down and land on hard surface and damage resulting in large Financial losses in addition to lost equipment and information. Parachute recovery is an important tool to avert damages and casualties caused by aircraft failures. Therefore, recovery parachutes have been developed for different weight class of Drones.

### SPECIFICATIONS

Customizable as per user requirement from 3kg to 100kg payload.





## Parachute Recovery System for PTA-LAKSHYA MK-II

Trusted Recovery Parachute



## Parachute Recovery System for PTA- LAKSHYA MK-II



### INTRODUCTION

This two stage Parachute is used for the safe recovery of Pilot less target Aircraft 'LAKSHYA' at the end of its mission. The maximum speed at which recovery can be initiated is limited to 810 kmph at 300 m AGL. The design speed for main parachute deployment is 60 m/s IAS.

### SPECIFICATIONS

Design of Canopy	:	Tri-Conical
Nominal Dia. of Canopy	:	14.56 m
Recovery Mass (AUW)	:	500 kg
Recovery Altitude	:	300 m AGL to 9 km AGL
Recovery Speed	:	At 300 m AGL, 270 kmph IAS (Min.) 810 kmph IAS (Max.) At 9 Km AGL 270 kmph IAS (Min.) 684 kmph IAS (Max.)
Packed Para Mass	:	≤ 22 kg
Volume of Packed Para	:	46000 cc.
Shelf Life of Parachute	:	10 Years
Max. permissible Packed storage	:	4 Months
Operational Life	:	Sea Recovery : 01 Land Recovery: 05 on normal recovery & 01 on emergency







## Advanced Lightweight Torpedo (ALWT)

*Torpedo Trajectory Control with Accuracy & Safety*



## Advanced Lightweight Torpedo (ALWT)



### INTRODUCTION

Advanced Light Weight Torpedo (ALWT) for air launch from helicopter, aircraft and missile. The parachute system is intended to accurately and safely control the trajectory of the Torpedo and to decelerate it to the desired velocity at splashdown. At splashdown, the parachute is to be detached from the torpedo.

### SPECIFICATIONS

All Up Weight	:	(AUW) 270 kg
Container Size	:	Ø440 mm X 2416 mm long
Aircraft	:	IL – 38 SD&P8I
Release Altitude	:	1000 to 10,000 ft (305 to 3,050 m)
Release Speed	:	350-500 kmph (97 to 139m/s)
Touchdown Speed	:	11 m/s
Shelf Life	:	10 years (Storage)
Drop Life	:	01 time





Paramotor

## Paramotor



### INTRODUCTION

A Paramotor combines easy flying characteristic of a Paraglider wing with the autonomy and range of powered flight.

### SPECIFICATIONS

#### ENGINE

Type of Engine	:	Two Stroke
Cooling	:	Air Cooled/Liquid Cooled
FOL	:	Unleaded gasoline
Fuel Tank Capacity	:	≥ 15 liters
Starter	:	Dual (Electric & Pull)
Power	:	Not less than 25 HP

#### PROPELLER

Material	:	Carbon fiber/composites
Configuration	:	Three Blade

#### PARAGILDER CANOPY

Canopy Shape	:	Elliptical Canopy
Glide Ratio	:	1:8 Approx.

#### PAYLOAD CAPACITY

≥ 100 kg





# RUBBER INFLATABLES





# Float Assembly for KM Bridge



*A Reliable Floating Bridge*

## INTRODUCTION

The Float is pneumatic and when inflated, it serves as a Floating pier for the KM Bridge for crossing rivers and rivulets. The float has 12 equal capacity compartments with one valve and one inner (centre) compartment with 4 valves. When inflated it is prism-shaped with lifted bow and stern ends. Float is provided with 28 straps for tying the saddle assembly to the float. It is deflated, rolled up and packed in a cover 'Paulin Assembly'.



## SPECIFICATIONS

Critical Dimensions of Float when Outer Compartments inflated to 125 g/cm<sup>2</sup> Pressure:-

Length	:	12000 mm
Width	:	3000 mm
Float Diameter	:	1000 mm
Length of Centre Portion (leg part)	:	5600 mm-1735 mm

Dimensions of Float when packed in Paulin Assembly:-

Length	:	1750 mm (Approx.)
Diameter	:	1150 mm (Approx.)
Weight of (deflated) Float	:	360 kg (Approx.)
Weight of Paulin Assembly	:	20 kg (Approx.)

Carrying Capacity (Outer Compartments Inflated to 125 g/cm<sup>2</sup> and middle to (10 g/cm<sup>2</sup>):-

For depth of immersion	:	500 mm	13 Ton
For depth of immersion	:	1000 mm	26 Ton
For complete immersion	:		34 Ton





## Boat Assault Pneumatic Light Weight 1A (BAPLW)

*State of the Art Assault Boat*

## Boat Assault Pneumatic Light Weight 1A (BAPLW)



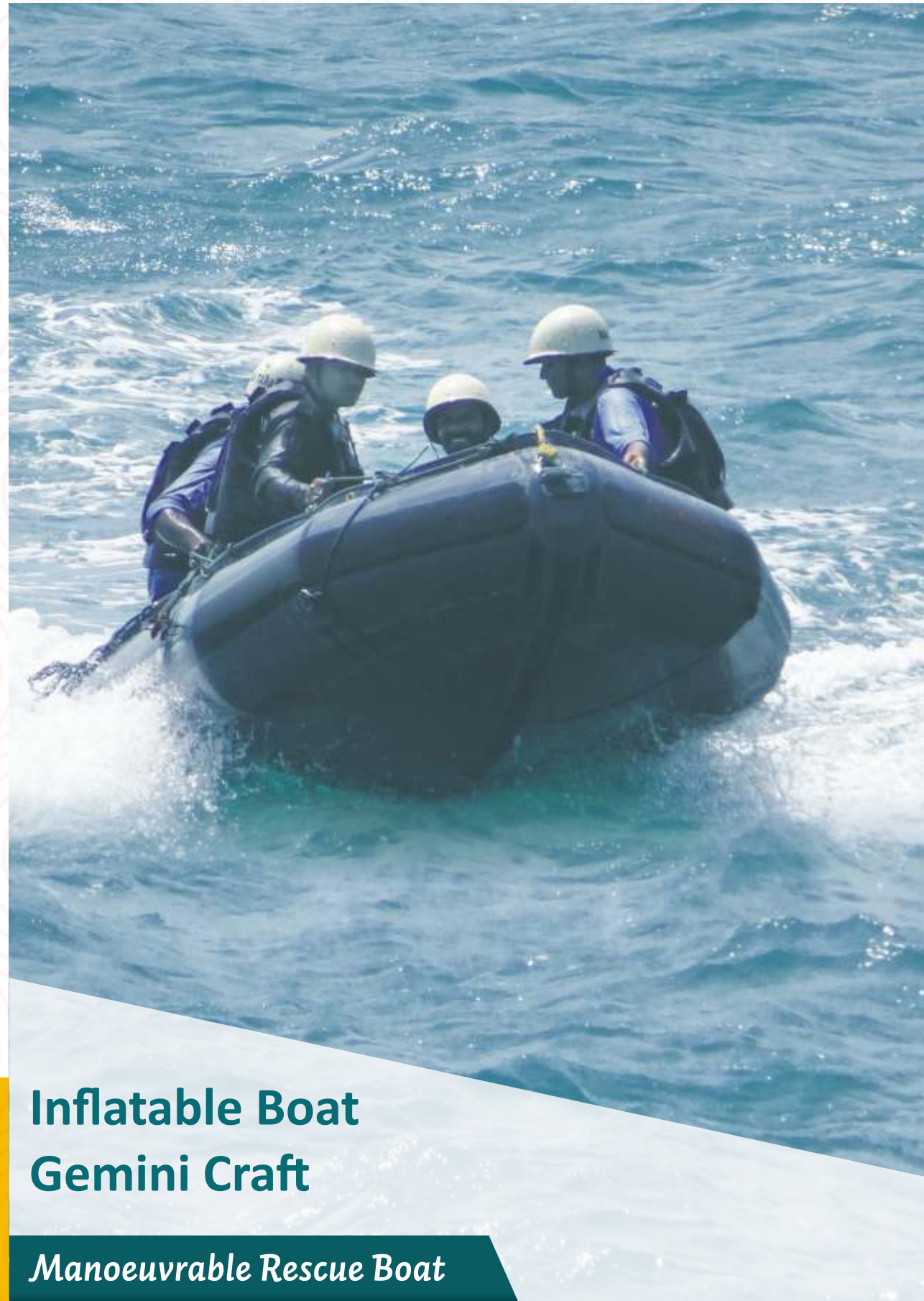
### INTRODUCTION

The Boat is intended to carry 12 fully armed and equipped men including two crews. An OBM 35 to 45 HP or paddles can be used for propulsion of the boat at a free board of 250 mm (1500 kg load). The boat has a 'U' shaped hull having two buoyancy tubes made out of rubberized nylon. The upper main buoyancy tube has a diameter of 500 mm and the lower buoyancy tube has a diameter of 250 mm. The main buoyancy tube has been divided into 6 compartments each fitted with a valve for inflation and deflation. The lower buoyancy tube has got one inflation/deflation valve at the stem end.

### SPECIFICATIONS

Overall Length	:	4950 mm
Overall Width	:	1900 mm
Hull Diameter	:	500 mm
Carrying Capacity	:	12 Fully armed men including two crews.
Weight	:	74 kg (Max.) without Floor & Accessories 121 kg with Floor & Accessories
Free Board	:	300 mm at 1200 kg load, 250 mm at 1500 kg load, 200mm at 2000 kg load (in full capacity)





## Inflatable Boat Gemini Craft

*Manoeuvrable Rescue Boat*



## Inflatable Boat Gemini Craft



### INTRODUCTION

The Gemini Craft is designed to be seaworthy and carry out functions like

- (a) Diving Operations
- (b) Life Boat
- (c) Transport men and material
- (d) Limited Search and Rescue Operations at sea and in harbour with full complement and have good manoeuvrability and throttle response through its speed range (using 25-30 HP OBM) and particularly when coming alongside or breaking away from an underway vessel at its full load and complement.

### SPECIFICATIONS

Length	:	Not more than 4700 mm
Width	:	Not more than 1900 mm
Dia. Of Buoyancy Tube	:	Not less than 450 mm
Carrying Capacity	:	8-10 Men (80.5 kg per person)
Speed	:	Not less than 05 knots commensurate with 25-30 HP OBM.
Weight of Craft	:	Not more than 125 kgs including Floor Boards and Accessories (without OBM).





## Boat Reconnaissance Pneumatic 3Men, 2A

*Boat for Recce in Assault Condition*

## Boat Reconnaissance Pneumatic 3Men, 2A



### INTRODUCTION

The Boat Recce Pneumatic 3 men 2A is a pneumatic rubber dinghy capable of carrying out measurement and observations during recce in assault condition. Special arrangements have been provided for fixing stretcher to evacuate casualties speedily. This boat is intended to carry 3 fully armed men with recce stores or a distributed load of 340 kgs at a free board of 254 mm measured at OBM Bracket Assembly. If any two compartments are punctured, the boat will still retain sufficient buoyancy to support the crew of three, provided that the holed compartments are on the opposite sides of the boat. Designed for propulsion both manually and with a 4.5 kw (6.5 HP) OBM.

### SPECIFICATIONS

Overall Length	: 3400 to 3451 mm
Length up to transom	: 2571 to 2649 mm
Hull dia.	: 401 to 425 mm
Clear inside width at OBM Bracket assembly	: 580 to 605 mm
Total weight including accessories	: 61.75 kgs to 68.25 kgs
Speed with one-man rowing	: 3.2 knots (1.6 m/s)
Speed with two men paddling	: 3.4 knots (1.7 m/s)
Speed with 4.5 kw (6.5 HP) OBM	: 6 knots (3.0 m/s)





## Splint Inflatable

Protection with Comfort



## Splint Inflatable

### INTRODUCTION

The Splint Inflatable is one sided rubberised, leg shaped inflatable tube provided with a closed end medium duty plastic Slide fastener, spout and a separate air filling assembly.

Splint Inflatable is used to prevent the fractured hand of injured person from further dislocating. It is worn by the injured person and then air is filled into the Splint Inflatable which reduces the blood flow to the affected area.

### SPECIFICATIONS

- Made of rubber coated nylon fabric.
- Waterproof.
- Zip provides ease of putting on.
- Provides comforts to the injured as the body movement is prevented by air filled in.







# COMBAT CLOTHINGS





## Poncho Glacier

*Complete Protection in Snow Bound Areas*

## Poncho Glacier



### INTRODUCTION

The Poncho Glacier is intended to be used by army personnel providing complete protection in snow bound areas and even from torrential rains for multipurpose uses in all region and terrain. It designed to serve as Cape with Hood, Bivouac and Ground sheet and provided with pack on the back. It is usable in universal size. The Polyurethane Coated surface of the fabric is kept inward while stitching the Poncho Glacier. The Poncho is manufactured in two pieces of rectangular shape fabric nylon 105 gm joined together longitudinally by two rows of machine stitching 7 mm apart leaving a portion about the centre for attachment of pouch and hood.

### SPECIFICATIONS

- The Polyurethane Coated surface of the fabric is kept inward while stitching the Poncho.
- Available in Universal Size.
- Available in Snow White colour.
- It is an open garment with camouflage property in sub-zero-degree glacier regions.
- It is also utilized as cover during snow fall.





## Water Proof Multi Purpose Rain Poncho Convertibility as Bivouac

*Camouflaging & Multipurpose Protective Wear*

## Water Proof Multi Purpose Rain Poncho Convertibility as Bivouac



### INTRODUCTION

The Water Proof Multi-Purpose Rain Poncho Convertibility as Bivouac is open garments with camouflage property. It is utilized as cover during rain. The Water Proof Multi-Purpose Rain Poncho Convertibility as Bivouac is made of 100% woven polyamide fabric. It is intended to be used by MHA personnel providing complete protection to rain for multipurpose uses. It designed to serve with hood, bivouac and ground sheet and provided with a pouch. Poncho is also provided with pockets. It is usable in universal size.

### SPECIFICATIONS

- The Polyurethane Coated surface of the fabric is kept inward while stitching the Poncho.
- Available in Universal Size.
- Available in different printing pattern i.e. force specific such as CoBRA, CRPF, BSF etc.
- Length of Poncho – 2120 ± 20 mm.
- Width of Poncho – 1620 ± 20 mm





## NBC Suit Permeable MK-IV

Protective wear for Toxic Chemical

## NBC Suit Permeable MK-IV



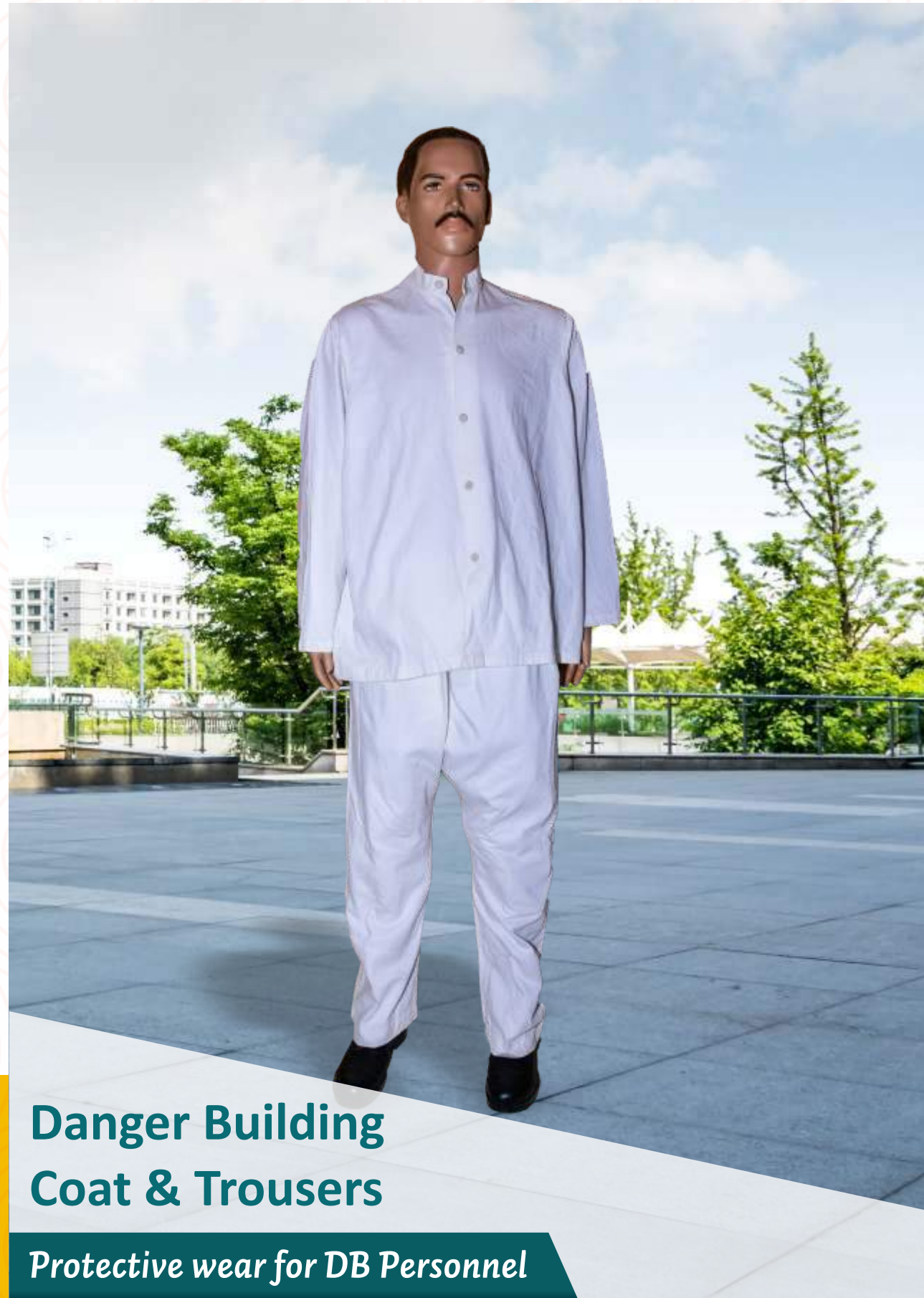
### INTRODUCTION

Nuclear, Biological & Chemical Permeable Suit provides protection against toxic chemicals. This suit consists of Jacket with integrated hood with Trousers and can be used directly over the under garments. The suit is air permeable and allows evaporation of sweat. The Suit is made in four Sizes i.e. Small, Medium, Large and Extra Large. The Jacket and Trousers have been made by integrated outer polyester fabric with the inner Active carbon spheres adhered laminated fabric. The Trousers has been provided with the gallice and fasteners hook and loop tape for tightening at the waist and tape elastic for tight sealing. Jacket is of front close design and integrated with hood for protection of head and ears and sleeves have been provided with hook and loop for proper sealing.

### SPECIFICATIONS

- It consists of Jacket & Trousers.
- It can be worn as either over garment or normal garment.
- It is permeable to air and breathable (allows sweat to escape) which provides comfort to the wearer from thermal stress.
- The outer fabric has Flame retardant and oil repellent characteristics and thus prevents burn injury and also repels chemicals droplets from the surface.
- The activated carbon spheres, which are adsorbent, are made from synthetic precursor materials having improved adsorption of toxic vapours and better mechanical strength.
- It is washable and can be reused up to 3 wash cycles, if washed with specified method.
- Size : Four viz. Small, Medium, Large & Extra Large.
- Weight : 3.0 Kg (Max.) for all the four sizes.
- Packing : Packed in laminated packing pouch after vacuuming and then heat sealing after filling with nitrogen to prevent degradation during storage.





## Danger Building Coat & Trousers

Protective wear for DB Personnel

## Danger Building Coat & Trousers



### INTRODUCTION

Personal Protective Clothing i.e. Danger Building Coat & Trouser are specially designed as a protective wear for personnel's worked in ammunitions filling units. The material and design of the Coat & Trouser is such that it reduces the static charge generation by clothes in ammunition filling units and reduce the fire chances due to static charge generation by clothes and also work as a protective wear for the personnel working in the filling units.

### SPECIFICATIONS

- It consists of Coat & Trousers.
- No Pockets and no belt loops are provided in Trousers.
- Trousers are available in four sizes.
- No pocket and no shoulder provided in the coat.
- Coat are also available in four sizes.
- Only Cotton make buttons are used in both Trousers and Coat.





Coat Combat

## Coat Combat



### INTRODUCTION

The Coat Combat is meticulously crafted for soldiers to don over their uniforms during frigid combat missions, ensuring optimal warmth and comfort in harsh cold weather environments. The outer shell boasts a striking digital print that seamlessly blends with the latest army uniform pattern, showcasing both functionality and aesthetics. Its unparalleled resistance to fading from light exposure, washing, perspiration, and abrasion makes it a durable choice for long-lasting use. Remarkably lightweight, it offers supreme comfort without sacrificing mobility, while the cutting-edge insulation material within provides an exceptional warmth-to-weight ratio. With the Coat Combat, soldiers can shield themselves from the abrupt weather fluctuations that often accompany combat scenarios, ensuring they remain ready and resilient in the face of adversity.

### SPECIFICATIONS

- Combat Coat Weight (Lighter Version) approximately 1.3 Kg.
- An elastic cord is included to improve the hood's adjustability.
- The detachable hood offers improved head and ear coverage.
- Centre Front zipper with protective wind flap.
- Air Vent zipper for ventilation under the sleeves.
- The high collar includes a stowable hood that can easily collapse.





**Coat Combat Disruptive  
with/without logo**

## Coat Combat Disruptive with/without logo



### INTRODUCTION

This specially designed jacket is perfectly suited for combat operations in cold climates. With its high effectiveness, it can be worn over any other garment for maximum protection and unparalleled disruption capabilities.

### SPECIFICATIONS

- The disruptive pattern of this product is made from a combination of polyester-cotton cloth (67% polyester, 33% cotton), featuring the iconic Indian Army Logo. The top layer is crafted from a durable cloth polyester-cotton blend (20% polyester, 80% cotton) in a striking greenish khaki color. The lining consists of a double layer of bonded polyester fleece for added warmth and comfort.
- The detachable inner, crafted from sumptuous fleece, offers both unparalleled insulation and irresistible comfort.
- Enhance your protection with a detachable hood that provides superior coverage for your hood and ears.





**Trouser Extreme  
Cold Climate**

## Trouser Extreme Cold Climate



### INTRODUCTION

It is suitable for use in areas with high altitudes and extremely cold weather conditions.

### SPECIFICATIONS

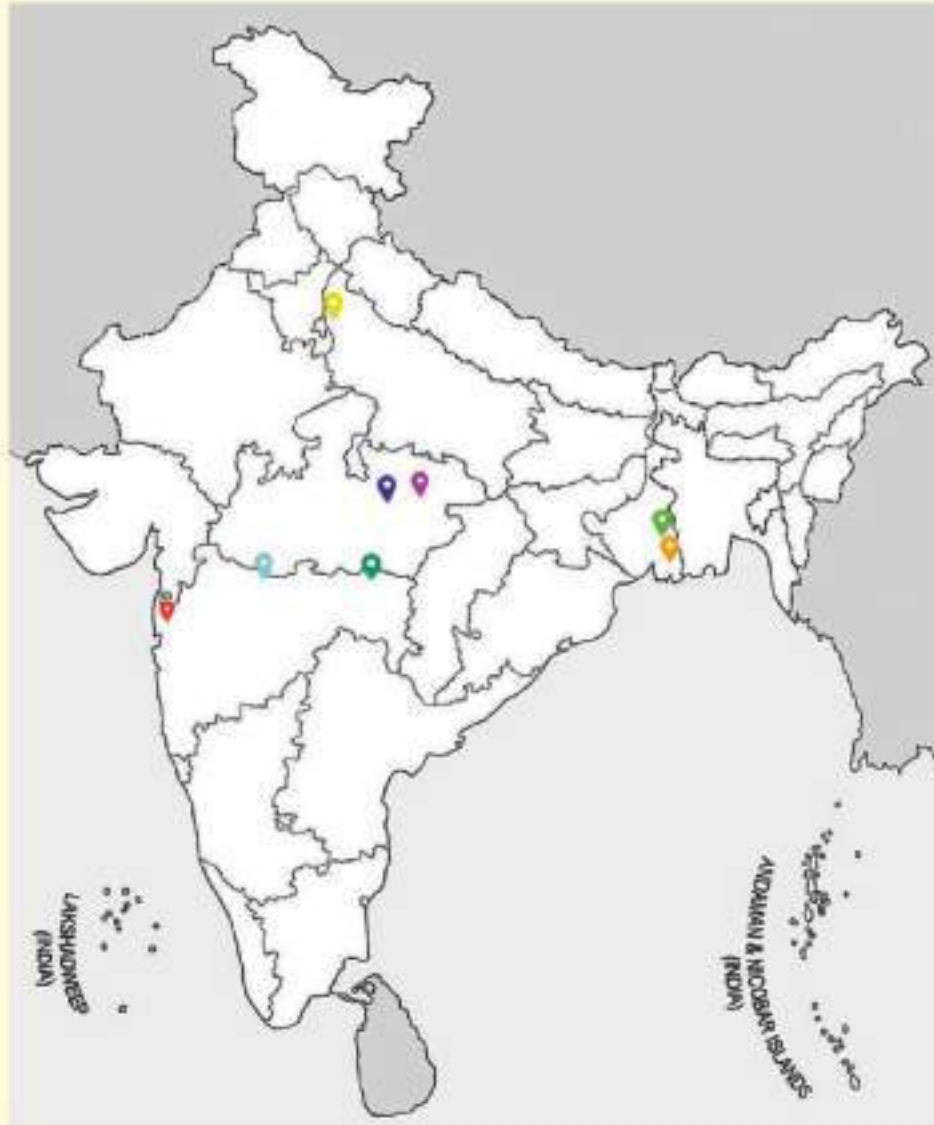
- Experience the perfect fusion of comfort and style with our innovative Trouser Wind Cheater, crafted with the finest Trouser Serge Poly Wool.
- Water repellent two layered garments
- The outer layer is designed to repel water. It protects from snow, wind & rain.
- The Inner Layer, made with high-quality 64<sup>s</sup> grade wool, guarantees optimal warmth and comfort.
- The Trousers Wind Cheater is the perfect outer layer to be worn over the Trousers Serge Poly Wool.





## 2. LOCATION OF MANUFACTURING HUBS OF YIL:

The 08 production units of YIL are located in West Bengal, Uttar Pradesh, Madhya Pradesh, Maharashtra and are named as under:



- Metal and Steel Factory, Ishapore, West Bengal
- Ordnance Factory Dum Dum, West Bengal
- Ordnance Factory Muradnagar, Gaziabad, Uttar Pradesh
- Ordnance Factory Katni, Katni, Madhya Pradesh
- Grey Iron Foundry, Jabalpur, Madhya Pradesh
- Ordnance Factory Ambajhari, Nagpur, Maharashtra
- Ordnance Factory Bhusawal, Maharashtra
- Ordnance Factory Ambarnath, Thane, Maharashtra

## 3. PRODUCT PROFILE

### 3.1 ROCKET

#### 140 MM ROCKET (EMPTY)

- End Use: 140 mm Rocket for Navel Gun
- Material: Aluminium & steel alloy.
- Dimensions :  
Diameter (External): 140 mm.  
Length of Fuzed Rocket: 1085 mm.
- Function: For used against infantry weapons and enemy ships by direct or indirect fire.
- End User: Indian Navy



#### PF PINAKA ROCKET

- End use : PINAKA MBRLS
- Material : Composite Material & Al alloy
- Dimensions : Length: 4950 mm
- Weight : 276 kg
- The PINAKA Multi Barrel Rocket System delivers accurate and massive firepower at high rate over extended range.
- End user : Indian Army



### 3.2 BARREL

#### BARREL AND OTHER ORDNANCE STORES IN FORGED / PYT CONDITION FOR MEDIUM CALIBRE WEAPONS:

- For Medium Calibre Weapons
- L-70 Air Defence Gun
- 30 mm BMP Gun
- 20 mm Vidhwansak Gun (AMR)
- 14.5 mm Pressure Barrel
- 12.7 mm AD Gun
- 81 mm Mortar Tube
- 84 mm RL Venturi
- L-70 ANTI AIRCRAFT GUN BARREL



### BARREL AND OTHER ORDNANCE STORES IN FORGED / PYT CONDITION FOR LARGE CALIBRE WEAPONS

For Large Calibre Weapons

- 155 x 52 Calibre MGS / ATAGS
- 155 x 45 Calibre Sharang
- 155 x 45 Calibre Dhanush
- 130/155 mm Uppgun MK - I & IV
- 120 mm MBT Arjun
- T-90 Tank
- T-72 Tank
- 105 mm LFG/IFG
- 120 mm Mortar Tube



### 3.3 SHELL BODY SHELL 155 MM ERFB HE BT & BB

- End Use: 155 mm ERFB Base Bleed (BB) ammunition is used for Bofors (FH77B) 155mm Howitzer Gun & Dhanush (Indian) 155mm x 45 Caliber Gun.
- Material : Steel
- Dimension : Dia. 157.86 - 0.20 mm, Overall length of Shell : 861 mm
- Mass of Shell without Fuze: 47 kg
- Maximum Range : BT Shells 23 km (39 Calibre Gun) BB Shells 30 km (39 Calibre Gun)
- Maximum Chamber Pressure  $345 \pm 8$  MPa
- End User: Indian Army



### SHELL 130 MM HE

- End Use: Medium range Artillery Gun M-46
- Material : Steel
- Mass of Shell without Fuze : 31.50 to 32.60 kg
- Dimension : Overall Length of Shell : 527 mm .
- Velocity : Full variable charge : 810 to 930 m/s  
Reduced variable charge: 525 to 705 m/s
- Maximum range: Full variable charge : 22.40 -27.49 km  
Reduced variable charge: 13.36 -19.13 km
- End User: Indian Army



### SHELL 125 MM HE

- End Use : Shell 125 mm HE for T-72 & T-90 Tank Gun
- Material : Steel
- Dimension : Length: 395.8 mm
- Mass of Shell without Fuze : 15.64 kg
- Max. range : 5000 m  
Max. chamber pressure : 412 MPa  
Muzzle velocity at +15°C : 850 m/s
- End User: Indian Army



### 84 MM TPT 65 SHELL BODY

- End Use: Recoilless Gun 84 mm RCL Carl Gustaf M2 .
- Material : Al. Alloy
- Dimension: Length : 535 mm
- Weight : 1.543 Kg
- Mass of projectile : 1.8 kg Muzzle velocity : 305 m/s
- End user : Indian Army



### 84 MM ILLUMINATING FFV 545 SHELL BODY

- End use : Fired from Gun 84 mm RCL Carl Gustaf illuminating round.
- Material : Al. Alloy
- Dimension: Length : 450 mm
- Total Mass : 3.1 kg
- Muzzle velocity : 260 m/s  
Range of burst : 300 to 2100 m  
Height of burst : 200 m (approx)
- End user : Indian Army



**AMMUNITION HARDWARE (STEEL) 81 MM(HE) , 81MM (PWP)**

- End Use: 81 mm Mortar Ammunition
- Material : Cast Steel for 81 mm (PWP) & Forged Steel for 81 mm (HE)
- Dimensions: Length - 241.8 mm & OD- 80.65 mm
- Weight : 2.748 Kgs.
- End User: Indian Army



**25 LBS BOMB BODY (EMPTY)**

- End Use : 25 Lbs. Bomb
- Material : Grey Cast Iron IS 210:1978
- Dimensions: OD- 101.6 mm & Length- 265.65 mm
- Weight: 8.70 Kgs.
- End User: Indian Air Force



**AERIAL BOMB 1000 LBS**

- End Use: For Aerial Bomb 1000 Lbs
- Material: C, Si, Mn, Steel
- Dimensions: Length: 1350 mm, Outside Dia: 519 mm
- Weight: 225±7 Kgs.
- End User: Indian Air Force



**AERIAL BOMB 450 KG HSLD (EMPTY)**

- End Use: 450 Kg HSLD Aerial Bomb
- Material: Steel IS 5517:1993 or IT90G
- Dimension: - Length: 1845.5 mm & Outside Dia: 360 mm
- Weight: 255 +/- 7 Kgs.
- End User : Indian Air Force.



**AERIAL BOMBS 250 KG**

- End Use: For Aerial Bomb 250 Kgs.
- Material: Steel to IS 5517:1993 and IT 90G.
- Dimensions: Length :1562 mm, Outside dia: 282 mm
- Weight: 145±5 Kgs
- End User: Indian Air Force



**100-120 KG AERIAL BOMB BODY (EMPTY)**

- End Use: For Aerial Bomb 100-120Kgs.
- Material: Steel to IS 2062 and other special grade steel
- Dimensions: Dia- 275 mm, Length- 1050 mm
- Empty Machined Body weight: 72 Kg
- End User: Indian Air Force



### 3.4 MINES

#### MINE APERS M-14 (EMPTY).

- End Use : Anti Personnel Land Mine
- Material: - Polymer Resin & Steel
- Dimension: - Dia. 56 mm & Length 40 mm.
- Weight: - 108 gms.
- Safety: - Inbuilt with 2 level of safety to avoid unintended functioning of fuze.
- End User: Indian Army.



#### MINE APERS 1B DIRECTIONAL (EMPTY)

- End Use: Anti Personnel Directional Land Mine
- Material : - Composite Polymer.
- Dimension: - Length – 216mm, Width – 124mm & Height – 38 mm.
- Weight: - 1.6 Kg (filled)
- Effective firing range:- 50 m.  
Max. Range:- 250 m
- Working temperature Range: +50 °C to -25 °C.
- End User: Indian Army.



#### CHARGE DEMOLITION NO.1 (EMPTY)

- End Use: Charge Demolition Filled
- No. of Components: - 03 Nos.
- Material: - Steel.
- Dimension: - Dia. 160 mm & Length 189 mm.
- Weight:- 1.98 Kg
- Purpose: - Demolition of buildings, bridges, Runways etc.
- End User: Indian Army.



#### HAND GRENADE BODY (EMPTY)

- End Use : Hand Grenade
- Material : Cast Iron IS 210 : 1978
- Dimensions: OD- 56.69 mm & Length- 89.15 mm
- Weight: 478 gm.
- End User: Indian Army



### 3.5 FUZE

#### FUZE SETTER HAND MK 1 & MK-1A

- End Use :- Time setting of Fuze 213 Mk 5 (M-1), (M-2), (M-3) & (M-4)
- Material: - Brass, Bronze, Aluminium & Steel
- Weight :- 1.7 Kg
- No. of Components : - 34 Nos.
- Purpose: - Fuze setter Hand MK-1 is used for time setting of Fuze 213 Mk 5 (M-1) and Fuze 213 Mk 5 (M-2) for firing Shell 105 mm IFG HE, Smoke & Illuminating. Fuze setter Hand MK-1A is used for time setting of Fuze 213 Mk 5 (M-3) & Fuze 213 Mk 5 (M-4) for firing of Bomb 81 mm mortar illuminating & 120 mm Mortar illuminating.
- End User: Indian Army.



#### FUZE B 429 & B 429E

- End use : shell 130 mm & 125 mm
- Material : Steel
- Dimensions: Overall length: 105.71 mm & Max external dia: 40 mm
- Point-Detonating (PD) Fuze
- Round Details Fuze B429E : 125 mm  
Fuze B429 : 130 mm
- End User: Indian Army



**FUZE DA 162 MK-8 (EMPTY) & FUZE DA 162 MK-9 (EMPTY).**

- End Use: Bomb 81 mm HE & PWP & Bomb 120 mm HE & PWP respectively.
- Material: - Brass, Steel & Mazak Alloy
- Dimension: - Dia. 38 mm & Length 90 mm
- Weight: - 480 gms.
- Type: - Mechanical, Direct action detonating Fuze
- No. of components: - 21 Nos.
- End User: Indian Army & Paramilitary Forces



**FUZE DA 5A (EMPTY)**

- End Use: Bomb 51 mm HE & PWP
- Material: - Aluminium Alloy, Brass and Steel.
- Dimension: - Dia. 50.8 mm & Length 81.8 mm
- Weight: - 270 gms.
- Type: - Mechanical, Direct action, Detonating, Nose type Fuze
- No. of components: - 22 Nos
- End User: Indian Army & Paramilitary Forces



**FUZE 40 MM PIBD (EMPTY)**

- End Use: 40 mm ammunition for UBGL/MGL
- Material: - Aluminium Alloy, Brass, Steel & Polymer
- Dimension: - Dia. 40 mm & Height 39.5 mm.
- Weight: - 65 gms.
- Type: - Mechanical, Direct action, Point Initiating Base Detonating, Nose type Fuze.
- Safety: - Inbuilt with 3 levels of safety to avoid unintended functioning of fuze.
- End User: Indian Army, India Air Force, Paramilitary Forces



**Fuze 24 A**

- End Use : 68mm Arrow Rocket
- Material : Al. alloy, Steel
- Dimension : Diameter 18.05x57.8 length (mm)
- Weight : 38.5 to 41 gms (Approx)
- End user : Air Force



**Fuze A 670 M**

- End Use : 30mm BMP-II
- Material : Al. alloy, Steel
- Dimension : Diameter 20x69 length (mm)
- Weight : 49 gms
- End user : Army



**3.6 TAIL UNIT**

**BALLISTIC TAIL UNIT TU 450 (BTU 450).**

- End Use: - 450 Kg HSLD Bomb.
- Material: - Steel, Aluminium casting & Polymer,
- Dimension: - Length – 1008 mm, Total fin span Dia. 590 mm.
- Weight: - 26 Kg
- No. of components: - 87 Nos.
- Sub Assemblies: - Tail Assembly, Fin Assembly, Vane Assembly & Arming Fork Assembly
- End User: Indian Air Force.



**BALLISTIC TAIL UNIT TU NO. 1111 (TU 1111).**

- End Use:- 1000 lbs HSLD Bomb.
- Material: - Steel, Aluminium alloy casting & Polymer,
- Dimension: - Length – 1023 mm, Total fin span Dia. 545 mm.
- Weight: - 30 Kg
- No. of components: - 83 Nos.
- Sub Assemblies: - Tail Assembly, Fin Assembly, Vane Assembly & Arming Fork Assembly
- End User: Indian Air Force.



**RETARDED TAIL UNIT RTU NO. 1121 (RTU 1121).**

- End Use: - 1000 lbs HSLD Bomb.
- Material: - Steel, Aluminium Casting & Polymer.
- Dimension: - Length – 915 mm, Total Fin Span Dia. 560 mm.
- No. of components: - 81 Nos.
- Sub Assemblies: - Tail Assembly, Fin Assembly, Vane Assembly
- Parachute Assembly & Anchoring Mechanism Assembly
- End User: Indian Air Force



**TAIL UNIT 8A WITH CAP**

- End Use: 51 mm Mortar Bomb
- Material : - Aluminium Alloy.
- Dimension: - Dia. 50.7 mm & Length 94.5 mm.
- Weight: - 95.35 gms.
- Purpose: - Aerodynamic stability to the projectile during flight.
- End User: Indian Army, ITBP, BSF, CISF, CRPF State Police etc.



**MODIFIED BALLISTIC TAIL UNIT NO. TB 250 MOD-I (BTU 250)**

- End use :- 250 Kg HSLD Bomb
- Material : - Steel & Polymer
- Dimension : - Length – 860 mm, Total Fin span Dia. 450 mm,
- Sub Assemblies :- Tail Cone Assy, Fin Assembly
- No. of components : - 51 Nos.
- End User : Indian Air Force



**TAIL UNIT ASSEMBLY FOR 500 KG GENERAL PURPOSE AERIAL BOMB**

- End Use: - 500 Kg general purpose bomb.
- Material: - Steel
- Dimension: - Length – 1086 mm & Total Fin span Dia. 595 mm
- No. of components: - 20 Nos.
- Sub Assemblies:- Tail Assembly., Fin Assembly.
- End User: Indian Air Force.



**STABILIZER ASSEMBLY 125 MM HEAT**

- End Use : 125 mm High Explosive Anti Tank Ammunition for Tank T-72 & T-90.
- Material : - Steel.
- Dimension: - Dia. 125 mm & Length 174 mm.
- Weight: - 2.8 kg.
- No. of components: - 06 Nos.
- End User: Indian Army



### FIN ASSEMBLY 125 MM HE

- End use : 125 mm High Explosive Ammunition for Tank T-72 & T-90.
- Material : - Aluminium Alloy, Steel & composite polymer
- Dimension: - 124.5 mm & Length 211 mm.
- Weight: - 3.44 kg.
- No. of components: - 05 Nos.
- End User: Indian Army



### 3.7 CARTRIDGE CASES

#### MEDIUM CALIBRE CARTRIDGE CASES

- End Use :SRGM HE& HE(I) Rd. 40 mm PFFC Ammn
- Material : 70/30 Brass
- Dimension: Mouth  $\varnothing$ : 35 mm to 90 mm, Flange  $\varnothing$ : 40 mm to 114 mm & Height : 200 to 635 mm
- Weight : 1 kg to 4 kg
- End User: Indian Armed Forces



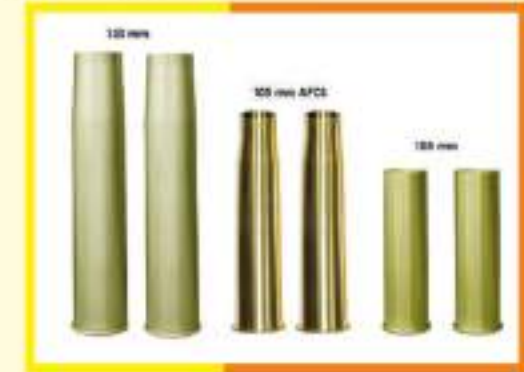
#### MEDIUM AND SMALL CALIBRE STEEL CARTRIDGE CASES

- End Use : ATAL smoke Grenade 30 mm HE, AP/T rd. 20 mm AMR Ammn
- Material : Steel as per spec
- Dimensions : Height: 80 mm to 200 mm, Mouth  $\varnothing$  : 19 mm to 81 mm & Flange  $\varnothing$ : 20 mm to 80 mm
- Weight : 80 gm to 900 gm
- End User: Indian Armed Forces



### HIGH CALIBRE CARTRIDGE CASES

- End Use : HE round of 130 mm and 105 mm, 105 mm APDS round
- Material : 70/30 Brass
- Dimension: Mouth  $\varnothing$  :150mm max, Flange  $\varnothing$  :185mm max & Height: upto 850 mm max
- Weight : 3.2 kg to 11.5 kg
- End User: Indian Armed Forces



### ALUMINIUM ALLOY CARTRIDGE CASES

- End Use: Ammunition Cartg. Cases
- Material : Aluminum Alloy
- Dimension : 20 mm to 75 mm in Dia,
- End User: Indian Armed Forces



### CANDLE SMOKE GROUND MK-3 (EMPTY)

- End Use: 84 mm Carl Gustaf M3 Weapon
- Material: - Steel Sheet.
- Dimension: - Dia. 83.8 mm & Length 297.8 mm.
- Weight: - 380 gms.
- End User :Indian Army



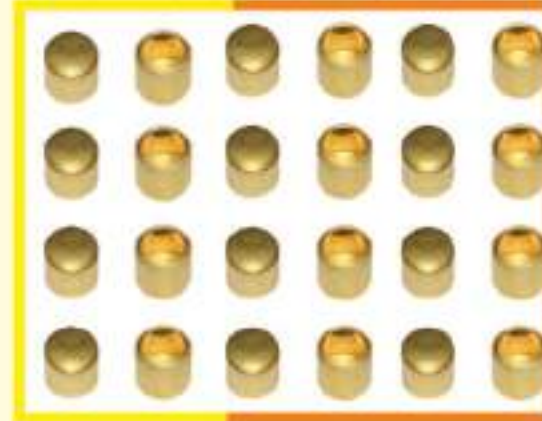


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### 3.8 SAA CUPS

#### BRASS SMALL ARMS AMMUNITION CUPS

- End Use: Cartridges for Small Arms Ammunition
- Material: Brass 70 :30 Brass
- Dimension:- Outer Ø: 10 mm to 32 mm & Height: 5mm to 20 mm
- Weight : 3 gms to 76 gms
- End User : - Indian Armed Forces, Paramilitary Forces, State Police



#### GILDING METAL SMALL ARMS AMMUNITION CUPS

- End Use: Bullet for Small Arms Ammunition
- Material: 90:10 Gilding Material
- Dimension: Outer Ø: 8.95 mm – 14.55 mm & Height: 0.50 mm – 1.70 mm
- Weight: 1.8 gm - 5.4 gm
- End User : - Indian Armed Forces, Paramilitary Forces, State Police



### 3.9 BIG ASSEMBLY

#### 13.2 M. DRY KRUPPMAN BRIDGE

- Function : Dry KM Bridge is a light weight and easily transportable bridging system. It is used to carry the latest military and civilian vehicles across the dry gap.
- Span: 13.2 m.
- Roadway Width: 4.2 m.
- Load Capacity: 20 MT
- Construction Time during Day : 2.5 Hr.
- Construction Time during Night : 3.5 Hr.
- Launching Weight: 6.52 Ton



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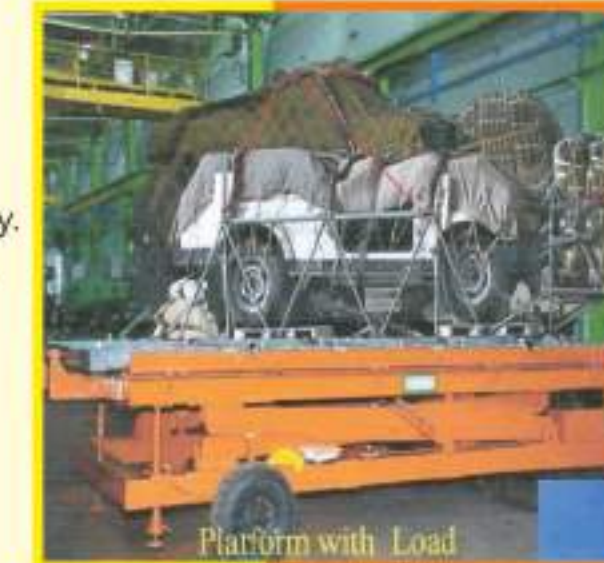
### HULL ASSEMBLY FOR MPV VEHICLE

- End Use : In assembly of MPV Vehicle.
- Dimension :Height : 1980 mm  
Length : 5740 mm & Width : 1750 mm
- End User: Indian Army & Paramilitary Forces



### AN-32 PLATFORM

- Function:It is used for para- dropping of heavy loads like vehicles, guns and ammunitions weighing upto 3000 kg from AN-32 aircraft.
- Material :High strength aluminium alloys and steel alloy.
- Dimensions : Length = 4472 mm, Width = 1869 mm, Height =1000 mm
- Capacity: 3000 kg
- No. of Modules: 4
- No. of Parachute : 5
- Rate of Descent: 6 m/s.



### PINAKA POD

- End Use : Pinaka Multi Barrel Rocket System
- Material: Aluminium alloys.
- Dimension : Pod Length: 5100 mm, Pod Width: 1300 mm. & Pod Height : 750 mm.
- Empty Pod Weight: 1000 kg.
- Loaded Pod Weight: 2700 kg.
- Function: For launching the Pinaka Rockets.





### TRACK ASSEMBLY FOR T-90 TANK

- End Use : T-90 Tank
- Dimension :Length: 13.284 meter,
- Weight of Track Assy. (Wrap): 1909 Kg.
- One set consists of Shoe, Clamp, Link & Guide
- End User: Indian Army



### Up gunning of 155/45 MM Sharang Gun

- End Use: The Sharang Gun is 155 mm 45 caliber artillery gun. It is an upgraded version of 130 mm 46 caliber FD Gun.
- Range- The firing range has increased to 39.0 Km as compared to 27.5 Km of 130 mm FD Gun.
- Firing Capacity- It can fire 4-5 rounds per min.
- Weight- 8450 Kg.
- Dimensions- Length in travelling position: 11.78 m, Width in travelling position: 2.45 m, Height in travelling position: 2.24 m.
- End User: Indian Army



### 3.10 CASTING

#### AUTOMOBILE CASTING

- Casting for Stallion And LPTA Trucks
- Weight: 2.5 Kg to 125 Kg,
- Metal Grades: Grey Iron & SG Iron,
- End User: Indian Army



### ARMOURED STEEL CASTING

- Castings manufactured for MBT Arjun Tank, 155 mm 45 Cal Dhanush, BMP-II, T-72 & T-90 Tanks.
- Castings with minimum weight of 1.25 Kg. to a maximum weight of 1130 Kg.
- End User: Indian Army



### 3.11 MULTIPLE PROFILES

#### AMMUNITION COMPONENTS

- Ballistic Cap & Empty steel Cartridge cases for Medium Calibre guns (30 mm & 14.5 mm).
- Forged Machined & Heat treated Steel components for PINAKA rocket, BMP-II, L-70 etc.
- Steel Cone for 125 mm Heat Ammn.



### STEEL PRODUCTS IN VARIOUS GRADES & FORMS.

- More than 80 grades of steel including Hot work tool Steel (H-11/13) and Martensitic Steel
- Forms : Round, Flat, RCS, Rectangular of different Profile
- Supply Condition : Forged / Rolled, Machined & heat Treated
- Railway Axles forging.



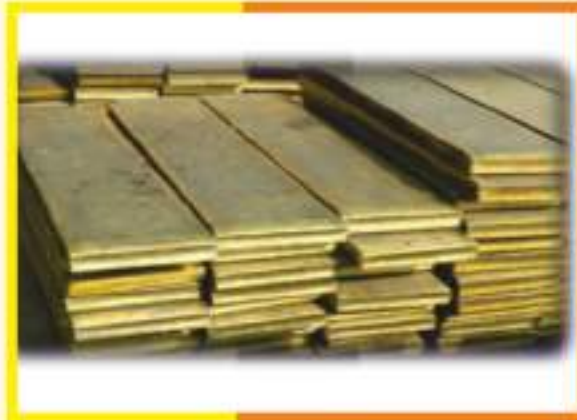
### NON FERROUS (COPPER ALLOYS) PRODUCTS IN VARIOUS GRADES & FORMS.

- Extruded and cold drawn brass rods & tubes of general purpose free machining brass such as CZ-121, 122, 129 etc.
- Brass pigs and Billets of various compositions.
- Brass rods of different dia ranging from 4 mm to 90 mm
- Brass tube with ID=15-60 mm, OD <95 mm.
- Brass Square/rectangular shape of size 40 mm-100mm or any other shape.
- High Tensile Brass such as CZ-108, 116 etc for Bushings.



### BRASS SLABS, BILLETS AND COILS

- Non-Ferrous Copper based slabs, billets, Coils and Continuous cast brass strip
- Available for Civil Trade.



### COPPER BASED EXTRUDED PRODUCT

- Hot Extruded Solid Bar, Hollow Tubes and components of any profile made by Pure copper & Gilding Metal
- Available for Civil Trade.



### ALUMINIUM ALLOY EXTRUDED PROFILES

- End Use: Aerotubes, Fuze Components, Tail Units, Armoured Tanks
- Material : Aluminum Alloy – 2XXX to 7XXXX
- Dimension: The width of the plate is 180 mm, Ext Profiles: T,I,U,L channels, Star, Plates, customized Tubes & Rods: Rods Ø-85mm max Tube Ø-90mm max
- Weight of the product : 1 Kg/meter to 15 Kg/ meter.



### DIE CAST PRODUCTS

- End Use : Hand Grenade 36 mm , Fuse 162, 51 mm smoke bomb etc.
- Material: Zn base Al alloy
- Weight: 1.1 gm- 62 gm
- End User: Indian Army, Paramilitary Forces



### 3.12 AMMUNITION BOXES

#### BOX C-44A

- End Use: Packing of Cartridge 105 mm IFG Shell
- Material: Steel Metal Sheet
- Dimension: 612 mm x 550 mm x 150 mm
- Empty Box Weight: 15.28 Kg.
- End User: Indian Army



### BOX C-51A STEEL

- End Use: Packing of 125 mm HE Shell
- Material: Steel Metal Sheet
- Dimension: 705 mm x 370 mm x 204 mm
- Empty Box Weight: 17.6 Kg.
- End User: Indian Army



### BOX D-4C TIN PLATE

- End Use: Packing of Detonator No. 36 M (4 & 7 Sec. delay)
- Material: Tin Plate, Varnish SHELLAC
- Dimension: 65.5 mm x 64 mm x 35.6 mm
- Empty Box Weight: 0.05 Kg.
- End User: Indian Army



### BOX H2A/L STEEL

- End Use: Packing of various small arms Ammn. i.e. 5.56 mm , 7.62 mm & 9 mm
- Material: Steel Metal Sheet
- Dimension: 311 mm x 194 mm x 156 mm
- Empty Box Weight: 2.80 Kg.
- Water Leak Proof
- End User: Indian Army



### CARRIER 6A

- End Use: One Carrier 6A contains 04 Nos. of Box H2A
- Material: Steel Metal Sheet
- Dimension: 634 mm x 310 mm x 195 mm
- Empty Box Weight: 6.5 Kg.
- End User: Indian Army



### BOX H5A/L STEEL

- End Use: Packing of 7.62 mm Belt Ammunition
- Material: Steel Metal Sheet
- Dimension: 283 mm x 190 mm x 97 mm
- Empty Box Weight: 1.8 Kg.
- Water Leak Proof
- End User: Indian Army



### BOX C-43A STEEL

- End Use: Packing of 105 mm IFG Shell
- Material: Steel Metal Sheet
- Dimension: 625 mm x 290 mm x 154 mm
- Empty Box Weight: 9.24 Kg.
- End User: Indian Army



### 3.13 OTHERS

#### TRAIL BODY LEFT & RIGHT OF DHANUSH GUN

- End Use: For Dhanush Gun
- Material: EN 10025-6-2004 Design 5690QL 1
- Dimension: L- 4285 mm, W- 1140 mm & H 750 mm
- Weight: 6.5 MT
- Ground Clearance : 675 mm
- End User: Indian Army



#### MAGAZINE 20 RDS AND 30 RDS. ASSEMBLY

- End Use: 5.56 mm INSAS Rifle & 5.56 mm INSAS Light Machine Gun (LMG) respectively.
- Material: - UV Stabilised Polycarbonate resin & Spring Steel
- Dimension:- L-126 mm, W- 54 mm, H-22 mm
- Visibility: - Semi transparent.
- Type: - Box type, Detachable Magazine.
- Shelf life:- 05-06 years.
- End User:- Indian Army, Paramilitary Forces, State Police etc.



#### LIFTING PLUG

- End use : For Handling of Shell 155 mm
- Material : BS 2789:85 SG Grade 420/12 and IS 1865:1993
- Dimension: Dia.- 62.5 mm & Height: 120 mm
- Weight: 1.4 Kg
- End User: Indian Army



#### MUZZLE ATTACHMENT FOR 38 MM GAS GUN GRENADE LAUNCHER

- End Use: 38 mm Gas Gun
- Material: - Aluminium Alloy
- Dimension: - Outer Dia. 65 mm & Length 171 mm.
- Weight: - 371 gm.
- No. of Components: - 04 Nos.
- End User: Indian Para Military Forces & State Police.



#### CELL FOR T-72 & T-90 TANK

- End Use: - Used in T-72 & T-90 tanks as a rotary conveyor to accommodate and index tank ammunition in the turret of the tank and helps in loading the ammunition to the barrel
- Material : - Steel.
- Dimensions :- Dia. 177 mm & Height 350 mm
- Weight:- 7.15 Kg.
- No. of Components: - 35 Nos.
- End User: Indian Army.



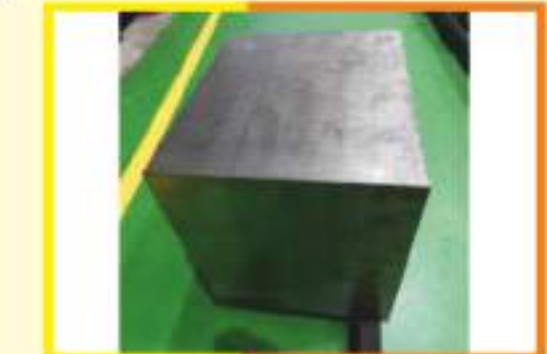
#### T-72 Breech Block

- End Use: T-72 Tank
- Material: GOST: B 5192-78 GRADE: OXH3M ØA
- Dimension: 1180(+5)X243(+5)X288(+5)mm
- Weight: 676 Kg
- End User: Indian Army



#### Dhanush Breech Ring

- End Use: Dhanush Gun
- Material: W3:2539 (ESR Quality)
- Dimension: 540(+5) X 520(+5) X 623(+5) mm
- Weight: 1411 Kg
- End User: Indian Army



# PRODUCT PROFILE

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## Tank T-90 Sights (BHISHMA)

- Fire Control System 1A43
- Thermal Imaging Sight "TI-ESSA"
- Anti Aircraft Sight PZU-7
- Simulator Test Interrogation Kit
- Commander's Sighting and Vision System PNK- 4S
- Driver Night Sight TVNE-4B M2
- Muzzle Bore Sight 125
- Commander Thermal Imager Cum Day Sight
- Commander Sight TKN-4S

## Tank T-72 Sights (AJEYA)

- Commander Thermal Imager Cum Day Sight MK-II
- Gunner's Sight TPD-K1
- Commander's Sight TKN-3
- Driver Night Sight TVNE-4B M1
- Muzzle Bore Sight 125

## BMP-II/ICV Sights (SARATH)

- Gunner's Sight BPK-2-42
- Commander's Sight TKN-3B
- Driver Night Sight TVNE-1PA
- Missile Sight 9SH-119M1
- Anti Aircraft Sight 1P3-3
- Driver Night Sight

## MBT Arjun Sights

- Gunner Unity Window
- Gunner Articulated Sight
- Driver's Day Periscope (SIDE)
- Drivers Periscopes Day Sight (CENTRAL)
- Commander Day Episcopes Assembly
- Loader Day Periscope

## Infantry Weapon Sights

- Telescope Sighting 5.56MM RIFLE(INSAS)
- Telescope Sighting 5.56MM LMG(INSAS)
- Day Sight Telescope for 7.62X51 mm LMG(5X)
- Night Sight (Thermal Imager) 84 mm Carl Gustav RCL
- Day Sight Telescope for 7.62X51 mm Assault Rifle(4X)
- PNS 5.56 mm for LMG
- MOD.PNS for 5.56 MM RIFLE (INSAS)
- MOD. PNS12.7AD GUN
- Telescope Sight for Anti-Material Rifle
- Red Dot Sight
- Telescopic Sight CGRL MK-III
- Telescopic Sight CGRL MK-I
- Zoom Telescope

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## Surveillance Sights

- Hand Held Thermal Imager
- HR Binocular 8x30
- Passive Night Vision Monocular
- Light Weight Passive Night Vision Binocular
- Passive Night Vision Goggle
- Long Range Thermal Imaging Sight
- Mini Uncooled Sight
- Binocular Drishiti 12X

## Artillery Sights

- Sight Unit Cased 102B
- Director Fire Control No. 7
- Sight Dial 104A
- Back-up Sights for Dhanush Artillery Gun

## Periscopes

- SE-15
- TNP-165A
- TNPO-160
- TNPO-168B
- TNPA-65A

## Wires & Cables

- Communication Cables
  - Cable Telephone JWD-I
  - Carrier Quad Cable
  - Jelly Filled Cables
- Anti Personnel Mine Cable
- Radio Frequency Coaxial Cables
- Jumper Wires
- Air Field Lighting Cables
- 20 Conductor Cable
- 3KV Plug and Socket Moulded Cable

## Cable Harnesses

- Turret Group
- Hull Group
  - Hot Zone
  - Cold Zone
- Stabiliser Group
- Automated Loading Group

## Stabilized Remote Controlled Gun

**T-90 Sights  
(BHISHMA)**



**Simulator Test Interrogation Kit (STIK)**



**Commander's Sighting and  
Vision System PNK- 4S**



**Commander Thermal Imager  
Cum Day Sight (CTI-T90)**



**Fire Control System IA43**

**T-90 Sights  
(BHISHMA)**



**Commander Sight TKN-4S**



**Anti Aircraft Sight PZU-7**



**Thermal Imaging Sight "TI-ESSA"**



**Driver Night Sight TVNE-4B M2**



**T-72 Sights  
(AJEYA)**



**Gunner's Sight TPD-KI**



**Driver Night Sight TVNE-4B MI**



**Commander's Sight TKN-3**



**Commander Thermal Imager Cum Day Sight MK-II**

**T-72 Sights  
(AJEYA)**



**Driver Night Sight**



**Driver Night Sight TVNE-IPA**



**Commander's Sight TKN-3B**



**Muzzle Bore Sight I25**



**BMP-II/ICV  
Sights  
(SARATH)**



**Anti Aircraft Sight IP3-3**



**Gunner's Sight BPK-2-42**



**Missile Sight 9SH-II9MI**



**Night Sight (Thermal Imager) 84 mm  
Carl Gustav RCL**



**Telescope Sighting 5.56MM LMG(INSAS)**



**Telescope Sighting 5.56MM RIFLE(INSAS)**



**PNS 5.56 mm for LMG**



**Infantry  
Weapon Sights**



**Zoom Telescope**



**Telescopic Sight CGRL MK-III**



**Telescopic Sight CGRL MK-I**



**Telescope Sight for Anti-Material Rifle**



**MOD.PNS for 5.56 MM RIFLE (INSAS)**



**MOD. PNSI2.7AD GUN**



**Day Sight Telescope for 7.62X51 mm Assault Rifle(4X)**



**Red Dot Sight**

**Surveillance  
Sights**



**Hand Held Thermal Imager**



**HR Binocular 8x30**



**Passive Night Vision Monocular**



**Binocular Drishiti 12X50**



**Light Weight Passive Night Vision Binocular**



**Long Range Thermal Imaging Sight**



**Mini Uncooled Sight**



**Passive Night Vision Goggle**



**Artillery  
Sights**



**Sight Unit Cased I02B**



**Sight Dial I04A**



**Director Fire Control No. 7**



**Back-up Sights for Dhanush Artillery Gun**



**TNPA-65A**



**TNPO-168B**



**Periscopes**



**TNP-165A**



**SE-15**

## Cable Harnesses





**3KV Plug And Socket Moulded Cable**



**Jelly Filled Cables**



**Carrier Quad Cable**



**Anti Personal Mine Cable**



**Cable JWD-I**

# SMART INFRASTRUCTURE

*Manufacturing facilities  
at Dehradun & Chandigarh  
which employ more than 3000 people.*

*Modern plant and  
machinery including  
clean rooms, electronic and  
optics manufacturing setup  
testing and assembly infrastructure.*



# LIFE CYCLE CLOTHING

## ADVANCED COMBAT UNIFORM (ARMY)



## ADVANCED COMBAT UNIFORM (AIR FORCE)



## ADVANCED COMBAT UNIFORM (NAVY)



### FEATURE

- Anti-bacterial & Anti-Microbial finish for hygienic wear.
- Jungle, Desert, Marine and Multi-terrain pattern for camouflaging in various terrains.
- For better ergonomics, comfort and utility.
- Provides NIR Camouflaging to avoid detection through Night Vision Devices during night time.
- Better moisture management to reduce heat stress.

# JACKET & TROUSER COMBAT P. C. DISRUPTIVE WITH INDIAN ARMY LOGO

## FEATURE

- Twill weave fabric with 20:80 Poly Cotton Blend for better moisture management and usability.
- Three colour disruptive pattern with brown, green and black printed on Khaki dyed base fabric.
- This design has been registered under class 05-05 (Textile fabrics) of Designs Act 2001 in the name of OCF Avadi.
- This Jacket is intended to use during combat duties in combination with trousers of same fabric by Indian Army.
- Comfortable to wear for all terrains.
- Good Pilling Resistance and Crease Recovery.
- Good colour fastness to Light, Washing, Perspiration and Rubbing.

## DESIGN

- Jacket and Trousers Combat PC Disruptive with Army Logo are used in combination.
- Reinforcement piece provided inside of the elbow portion of sleeves of the Jacket.
- Provision of Air Vent on Jacket and Trousers.



# COAT COMBAT (LIGHTER PATTERN)



## FEATURE

- The Coat Combat is intended for use over uniform during combat duties under cold climatic condition by soldiers.
- The outer shell fabric is Digital Printed (New Army Uniform Pattern).
- Protect wearer from sudden shock due to weather change.
- It possesses very good fastness to light, washing, perspiration & rubbing.
- Insulation material used with high warmth to weight ratio.
- Very light weight and provide extreme comfort.
- Weight of Coat Combat (Lighter Pattern) - 1.3 Kg (Approx).

## DESIGN

- Elastic cord is provided for better adjustment at hood.
- The detachable hood provides better coverage of head & ear.
- Centre Front zipper with protective wind flap.
- Air Vent zipper for ventilation under the sleeves.
- High collar with stowable collapsible hood.



# COAT COMBAT DISRUPTIVE WITH INDIAN ARMY LOGO

## FEATURE

- For use over Jacket Disruptive during combat operations under cold climate.
- Made from combination of cloth Polyester cotton (67:33) disruptive pattern with Indian Army Logo & Cloth Polyester – Cotton (20:80) Greenish Khaki as top layer and double layer Bonded Polyester Fleece as lining.
- Detachable inner made from fleece provides insulation & comfort.
- Detachable hood for better coverage at hood & ear.



# RAIN CAPE MULTIPURPOSE (PONCHO)

## FEATURE

- Multipurpose Rain Coat styled in Poncho Design.
- Provides complete protection from torrential rain.
- Usable as Personal Shelter, Ground Sheet, Make Shift Stretcher and Biwi Sack.

# EXTREME COLD CLIMATE CLOTHING (ECC)

## JACKET EXTREME COLD CLIMATE (TWO LAYER)



### FEATURE

- Suitable for high altitude combat operations under cold climate at 14000 feet at temp up to  $-20^{\circ}\text{C}$  & wind velocity 40 Km/hr.
- Water proof, Wind proof and Breathable Outer Layer with added insulation & Inner Layer helps to keep body dry & comfortable.
- Thermal insulation value (TIV) 4.50 Clo approx.
- Light Weight, Ergonomic & Rugged Design.

# COAT EXTREME COLD CLIMATE



## FEATURE

- Suitable for very low temperature up to  $-10^{\circ}\text{C}$  under cold climate up to 11000 feet & wind velocity 40 Km/hr.
- Water proof, Wind proof and Breathable Outer Layer, Middle Layer with adequate insulation & Inner Layer to keep body dry & comfortable.
- Reversible Outer Layer (OG & White), Middle Layer consists of Polyester insulation filling with knitted aluminized fabric & polyamide fabric (for outer & inner shell) and the Inner Layer made from Fleece.
- Thermal Insulation Value (TIV) 3.00 Clo approx.
- Light Weight, Ergonomic & Rugged Design.
- Detachable hood.



# OVERALL WINTER FOR AFV CREWS

## FEATURE

- For use by tank crews and maintenance crews under cold climate condition.
- Provides protection against temp up to  $-20^{\circ}\text{C}$  and high wind velocity upto 40 Km/hr at 14000 feet.
- The outer layer is Water proof, Wind proof and breathable.
- Effective transmission of Water-Vapour in Inner Layer to maintain breathability and comfort.
- Thermal Insulation Value (TIV) of the entire system is 3.84 Clo (as per BS EN 342 : 2004 Annex 'B' Tested at WRA).



# TROUSER EXTREME COLD CLIMATE



## FEATURE

- Extreme cold weather garment.
- Combination of Trousers Wind Cheater and Trousers Serge Poly Wool.
- Water repellent two layered garment.
- Outer Layer is water repellent. It protects from snow, wind & rain.
- Inner Layer made with 64<sup>s</sup> grade of wool provides warmth.
- Trousers Wind Cheater to be worn as outer layer over Trousers Serge Poly Wool.

# CAP BALACLAVA (OG) IMPROVED VERSION



## FEATURE

- It is used by Army personnel as a head gear for protection against cold climate to the extent of -10°C at high altitude area.
- It provides better cover of head and ear.
- Peak is to protect from sun light.
- Provided with Velcro for better adjustment.
- Good colour fastness to light and washing.

# EXTREME COLD WEATHER CLOTHING SYSTEM (ECWCS)

## FEATURE

- Suitable for high altitude area of 18000 ft temperature upto  $-50^{\circ}\text{C}$  & wind velocity of 40 Km/hr (wind chill effect).
- Water proof, wind proof and breathable Outer Layer. Middle Layer with high warmth to weight ratio insulation. Inner Layer with moisture wicking breathable fabric.
- Thermal Insulation Value (TIV) 4.50 (Approx) as per BS EN 342:2004 Annex 'B'.
- Light weight, Ergonomic & Rugged Construction.

## DESIGN

- Three independent layers viz. Inner Layer, Middle layer & Outer layer.
- Both the Outer & Middle Jackets have non-detachable hoods with elastic cord.
- Can be used either independently or with any or both of the other two layers depending upon the ambient condition.



# EXTREME COLD WEATHER CLOTHING SYSTEM (ECWCS) HIMVEER (7 LAYER SYSTEM)



LEVEL I



LEVEL II



LEVEL III



LEVEL IV



LEVEL V



LEVEL VI



LEVEL VII

## FEATURE

- Seven levels of protection to function as a dynamic system to meet personal climate tolerances.
- 7 level consisting of 12 components work in conjunction to provide insulation and wick moisture from the body with superior breathability and wind protection.
- Allows soldier to train, operate and sustain combat operations in a broad climate range from  $-50^{\circ}\text{C}$  to  $4^{\circ}\text{C}$  and high wind velocity upto 40 km/hr extending their ability to take the fight to the enemy anywhere.
- Can be worn either individually or collectively, together or mix and match as per need of different weather conditions.



# CAP GLACIER IMPROVED VERSION

## FEATURE

- The Cap Glacier is a multilayered Cap.
- It is intended to be used by Army personnel in snow bound area.
- The outer shell fabric is water and oil repellent.
- Neck flaps provide better coverage of head, neck and cheeks in use.
- Peak provides protection from sun light.
- Impermeable to air.
- Better durability.
- Use of knitted aluminized fabric offers better reflection of heat resulting in enhanced insulation.



# JACKET & TROUSER WIND CHEATER

## FEATURE

- To protect from rain, snow & high wind velocity.
- Good water repellence (Spray rating test rating 80 as per IS:390).
- Ergonomic & durable design.
- Light Weight.



# GAITERS GLACIER

Can be used as a cover between trousers, bottom and shoes mouth to provide complete protection against ingress of ice and water in glacier region.

## FEATURE

- Breathable fabric.
- Resistance to low temperature.
- Rustproof metallic components.

## BASIC MATERIAL

- Fabric Nylon PU Coated 250 GSM.
- Plastic slide fastener.
- Nylon sewing threads and polypropylene twines.



# PONCHO GLACIER

## FEATURE

- To Protect from Torrential rain during operation in Snow bound Mountains and Glaciated terrain.
- Multiple role like Bivouac and Ground Sheet.
- Provide adequate comfort during combat operations.
- Bolster type carry bag.

# BOOT CRAMPON

## FEATURE

- Suitable for climbing snow laden mountain/slope.
- Light weight.
- Stainless Steel Grade 304 S1.
- Suitable upto -50°C.



# ROCK PITON

## FEATURE

- It is a steel wedge that is hammered into a crack in the rock and used to secure a rope for climbing.
- Constructed in various sizes, shapes, and lengths that are hammered into cracks in a rock surface.
- An eye or ring at the end of the piton allows a Karabiner and a rope to be clipped into the piton, creating a solid anchor point.

## BASIC MATERIAL

- Made of hard chrome-molybdenum steel to sustain in high altitude areas for easy climbing with high durability.



# ICE PITON

## FEATURE

- It is an essential Ice Gear.
- The piton tube features a tapered profile for a smooth passage of the screw in ice.
- At one end of said tube is a swivel assembly that rotates in one position and is fitted in the other end to which the climber attaches the rope.

## BASIC MATERIAL

- Made from hardened Toughen Steel or aluminium alloy.



# ICE AXE AND SHOVEL

## FEATURE

- It is indispensable equipment at high altitude areas.
- Same shaft can be used to mount axe and shovel as and when required.
- It is currently being imported by Indian Army.

## BASIC MATERIAL

- Axe Pick: Chrome Steel / 316L Stainless Steel.
- Shovel: Al Alloy Grade 7075 / 3086.
- Shaft: Al Alloy Grade 7075 / 6082.

# KARABINER

## FEATURE

- It is a Mountaineering Equipment for troops operating in high altitude area as Snow Bound, Mountains and Glaciated terrain.
- It is a specialized type of shackle, a metal loop with a spring-loaded gate used to quickly and reversibly connect components, most notably in safety-critical systems.

## BASIC MATERIAL

- Made from extruded aluminium alloy.
- The alloy consists of aluminium, which is naturally lightweight and pliable for easy forming, and zinc, which adds strength.



# AVALANCHE ROD

## FEATURE

- Avalanche rod is used by avalanche rescue team to probe the debris of avalanche to search for victim buried under it. Avalanche rod has 06 sections of 02 ft each which are joined together as per requirement for probing.

## BASIC MATERIAL

- Made from aluminium alloy & alloy steel.



# JUMAR ASCENDER

## FEATURE

- It is attached to the climber's harness by a piece of a sling, and then the Ascender is clipped onto the rope and locked using a Carabiner for extra protection.
- The device permits to slide freely in one direction but tightly grip the rope when pulled on in the opposite direction.
- Available in Pair for Right / Left handed.



# HAMMER PITON

## FEATURE

- It is used as a mountaineering equipment.
- Lightweight and well balanced rock-hammer with hardened steel head.
- Ideal for alpine climbing routes.

# BOOTS

## BOOT HIGH ANKLE DIRECT VULCANIZED SOLE

### FEATURE

- Multipurpose All Terrain Boot.
- Direct Vulcanized Sole.
- High Ankle for Safety and Protection.
- Manufactured with High Grade Leather and Natural Rubber.



## BOOT HIGH ANKLE RUBBER PU SOLE

### FEATURE

- Multipurpose All Terrain Boot.
- Anti Skid Sole.
- High Ankle for Safety and Protection.
- Manufactured with High Grade Leather and PU Mid Sole & Rubber Out sole.



## INDUSTRIAL SAFETY SHOES

### FEATURE

- Workshop Shoes with Anti Static, Slip Resistance and Oil Resistance Property.
- Manufactured using high quality leather with PU-PU Injection Moulded Sole.
- Steel Toe with high impact resistance.



## SHOES OXFORD

### FEATURE

- Shoe for officers and ground duty.
- Direct Vulcanized sole.
- Manufactured with High Grade Leather and Natural Rubber.



# ANTI SKID SHOE WORKING

## FEATURE

- Anti skid shoe made of full grain upper leather.
- Has slip resistance SRA SRB and SRC.
- Is oil resistance, fuel resistance and anti static properties.
- Suitable for all personal working in maintenance and allied work.



# DESERT COMBAT BOOT

## FEATURE

- Hot weather slip resistant, water resistant combat boot.
- Tan colour brass speed lacing hooks.
- Suede Leather and Rubber & PU Injection Sole.



# BOOT MULTIPURPOSE

## FEATURE

- For hiking in snow and glaciated terrain at 18000 feet and temp up to -50°C with wind velocity 40 Km/hr.
- Compatible with Boot Crampon.
- Insulated with Gel Membrane / Aerogel & Gore-Tex Membrane.
- Outer Shell of Thermoplastic Polymer material.



# SNOW BOOT

## FEATURE

- For hiking in snow and glaciated terrain at 14000 feet and temp up to -20°C with wind velocity 40 Km/hr.
- Made of water proof full grain white genuine leather.
- Outer Sole made of nitrile rubber compound.
- Three layer insocks are used for insulation.
- Rustproof metal D Rings are used in eyelets.
- Outer sole has anti skid SRC, and fuel resistant properties. On inner side thinsulate fiber is used for better insulation.



# GLOVES

## GLOVES OUTER GLOVES INNER (GOGI)

### FEATURE

- Two layered gloves system for use in inhospitable terrain and extreme high altitude area and extreme cold climate.
- For protection & warmth at temperature upto  $-50^{\circ}\text{C}$  and wind speed up to 40 km/hr.



## GLOVES LEATHER WHITELINED

### FEATURE

- Two layered gloves for protection against Cold, Wind and snow in extreme cold climates.
- Slit provided in index finger of the glove for trigger operation.

## MODULAR GLOVES

### FEATURE

- Three layered gloves system for use in high altitude area and extreme cold climate.
- For protection and warmth at temperature up to  $-50^{\circ}\text{C}$  and wind speed up to 40 km/hr.





# BACKPACKS

## BAG KIT UNIVERSAL MK-II

### FEATURE

- A Hand Bag, used to carry personal belongings.
- Easy in carrying and handling.
- Waterproof and Flame Retardant.
- Straps to carry like Backpack.



## DUFFLE TROLLEY BAG

- Used for carrying personal belongings while on duty.
- Attached with trolley having radial wheels for easy movement.

### FEATURE

- Water proof.
- Excellent durability.
- Radial wheels.
- Resistance from low temperature and accelerated ageing.

### BASIC MATERIAL

- Nylon 300 GSM Rip stop PU coated FR fabric & Nylon PU coated OG 60 GSM fabric.
- Polyester 25mm O.G. tape.
- EVA Foam sheet of 2mm thickness.
- Polypropylene bottom sheet of 1.5mm thickness.



# BACKPACKS

## RUCKSACK 90 LTRS

### FEATURE

- Lightweight, waterproof bag pack with 90 L capacity.
- Detachable 20 L Back pack.
- Wide shoulder straps and adjustable waist belt with nylon air mesh for evenly weight distribution and air circulation.



## RUCKSACK 70 LTRS

### FEATURE

- Lightweight, waterproof bag pack with 70L capacity.
- Aluminium alloy, padded adjustable waist belt and shoulder straps for evenly weight distribution.



## AIRBORNE RUCKSACK 70 LTRS

### FEATURE

- For Parachute Jumps.
- Made with 1000D Cordura x 2 WRC OG.
- Quick Release Buckles.
- Heavy Duty Delrina Buckles.
- Modular system for extending capacity.



# TACTICAL ITEMS

## INFANTRY COMBAT KIT

### FEATURE

- Infantry Combat Kit for carrying battle loads.
- Pouches- For carrying magazine and grenade, maps and documents.
- Pack (35 Ltrs.)- For carrying personal belongings.
- Haversack- For carrying foods and medicine.
- Frog bayonet- For Carrying gun Spear / Knife safely.
- Belt waist- Adjustable size from 24" to 40".



POUCHES



PACK



HAVERSACK



BELT WAIST



FROG BAYONET

# MODULAR LIGHT WEIGHT LOAD CARRYING EQUIPMENT

### FEATURE

- MOLLE consist of Modular Rucksack, Assault Pack, Medic Bag, Waist Pack, Hydration System and Ammunition Pouches.
- 40Ltrs/55Ltrs/70Ltrs/90Ltrs/110Ltrs Modular Rucksack with Ergonomic Frame.
- Modular System can be easily mounted or dismounted.
- Hydration system can be used to purify water from any source and make it potable for the soldier. Filtration upto 1,00,000 Gallons and 0.1 Micron Filtrations.
- It has provision for mounting Soft Armour Panel (SAP) and Hard Armour Panel (HAP) in the fighting load carrier to work as a Bullet Resistant Jacket.



ASSAULT PACK



RUCKSACK



HYDRATION SYSTEM



## TACTICAL BACKPACK 50 LTRS

### FEATURE

- Military Tactical Backpack for Outdoor Camping, Hiking, Trekking and as an Assault Backpack.
- Modular, Ergonomic Design with Heavy Duty Zippers.
- Airmesh padding with ventilation system.
- Made with 1000D Cordura WR WP Fabric for rugged use.
- 50 Ltrs. Capacity.



## TACTICAL BACKPACK 30 LTRS

### FEATURE

- Military Tactical Backpack for Outdoor Camping, Hiking, Trekking and as an Assault Backpack.
- Modular, Ergonomic Design with Heavy Duty Zippers.
- Airmesh padding with ventilation system.
- Made with 1000D Cordura WR WP Fabric for rugged use.
- 30 Ltrs. Capacity.



## TACTICAL PATROL BAG

### FEATURE

- 3 day back pack for Patrolling, Outdoor Camping, Hiking, Trekking.
- Basic Material 1000D Cordura x 2 Water Repellent coated.
- Equipped with Quick release buckle with hook & loop mechanism.
- Light weight, Ergonomic & Rugged design.
- Equipped with wide shoulder pads for proper ventilation.

# TACTICAL MEDICAL BAG

## FEATURE

- Medical Bag with multiple pockets for carrying Bandages, Injection, Medicines, etc.
- Basic Material 1000D Cordura x 2 Water Repellent.
- Ergonomic design for easy use.
- Nylon webbings and Nylon tapes for strength & rugged use.
- Heavy Duty Plastic Slide Fasteners.



# TACTICAL KNEE & ELBOW PAD

## FEATURE

- For providing protection from injury in Knee & Elbow to soldier during combat operations.
- Basic material 1000D Cordura x 2 Water Repellent coated.
- Ergonomic design with cushioning and proper ventilation.
- Nylon cap & Nylon Tapes for adequate strength & ruggedness.
- Nylon Pad provided for proper shape.



# BULLET RESISTANT JACKET

## BULLET RESISTANT JACKET (BHABHA KAVACH)



### FEATURE

- Light Weight Bullet Resistant Jacket.
- Provides 360° protection.
- Developed in collaboration with BARC and MIDHANI.
- Protection level NIJ - III Standard 0101.06.



## BULLET RESISTANT JACKET (BRJ)

### FEATURE

- Meets QRs of MHA GSQR for threat level III+, BIS Level 5 of IS 17051: 2018 and NIJ Level III of NIJ 0101.06 standards.
- Ergonomically designed for 360° protection of Front, Back, Sides, Groin, Throat and shoulder.
- Magazine and Grenade Pouches.
- The weight may vary from 5.1 kg to 13.72 kg depending on User Requirement.

# BULLET RESISTANT JACKET (NIJ LEVEL IV)

## FEATURE

- Light Weight Bullet Resistant Jacket for protection against Armour Piercing Incendiary.
- Provides 360° protection.
- Protection level NIJ - IV Standard 0101.06.
- Tested and proved at recognized laboratory.



## BRV VEST FEMALE

### FEATURE

- Ballistic standards for threat level III A of NIJ 0101.06.
- Protection level: Soft Armour Panel provides protection against 9mm carbine at a distance of 5 meters.
- Offers 360° protection with Shoulder Soft Armour Panels.
- Weight: 1.6 -1.8 kg for various sizes.
- Max Back Face Signature of 44mm (max).
- Tested and proved at recognized laboratory.



# BULLET RESISTANT JACKET FOR CANINE

## FEATURE

- Developed as per requirement of Army Dog Unit to protect the Canines from life threats.
- Hard Armour Panel (HAP) made of Ultra High Molecular Weight Polyethylene UD fabric composite.
- Soft Armour Panel (SAP) made of Para Aramid/UHMWPE UD Fabric layers and Anti Trauma Lining Materials.
- Maximum weight of the BRJ is 3 Kgs  $\pm$  200gms.



# VEST

## BULLET RESISTANT VEST

### FEATURE

- Meets Qrs of MHA GSQR, BIS Level I of IS 17051:2018 and NIJ Level IIIA of NIJ 0101.06 Standard.
- Provides protection against Handguns, Pistols, Revolvers, Submachine Guns and other 9mm calibre ammunition at a distance of 5 metres.
- Overall weight ranges from 1.2 to 1.7kg.
- High Buoyancy option available.



## BALLISTIC HELMET

### FEATURE

- For protection against Threat Level NIJ IIIA or BIS-1 as per IS 17051:2018.
- Modular type accessory attachments for Night Vision goggles, Visor, Torch, Headphones, Wireless communication devices and Counter weight etc.
- Maximum weight of 1.3 kg.



## BALLISTIC BRIEFCASE

### FEATURE

- Meets Qualitative Requirements of NIJ-Level IIIA.
- Folded Dimensions - 500x400mm, Protection Area - 1200x450mm, Weight - 3.9 kg.
- Outer Carrier is made of highly durable Textured Leather.
- Provided with simple quick release system with self lock magnets to unfold the briefcase into ballistic shield.
- Armour panel of briefcase contains multiple layers of ballistic light weight fabrics.
- Water proof, high abrasion resistant with high tensile strength.

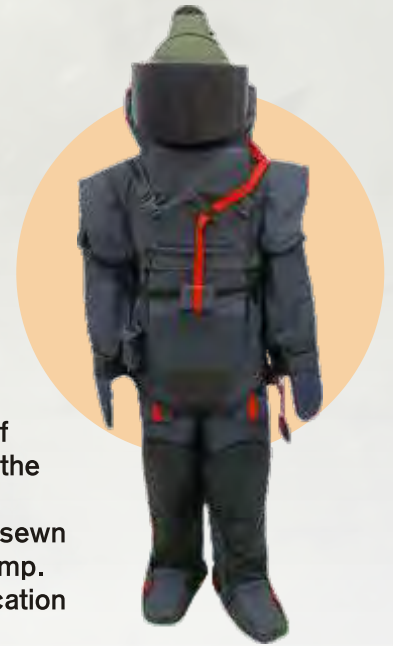




# BOMB DISPOSAL SUIT

## FEATURE

- Suitable for use by State Police forces, MHA forces like BSF, ITBP, NIA, SSB etc. various Bomb Disposal Squads.
- Protection against threats of Fragmentation, Impact, Blast Overpressure, Thermal Effect.
- Highly durable Flame Retardant Outer Carrier having Jacket, Trousers, Integrated Groin Protector, Boot Over shoes.
- Armour Panels (SAP and HAP components) meeting specification requirements of various fragment protection levels for different parts of the body providing better Ballistic protection without compromising the flexibility.
- Cooling Suit Flame retardant inner garment with integrated cooling tubes sewn into the suit for circulation of cooling water along with battery operated pump.
- Helmet with removable visor, balaclava, ventilation system, communication system and having provision for search light and video camera.
- Two way communication system wired and wireless systems between operator and base station.



# FULL BODY PROTECTOR

## FEATURE

- It is a personal protective equipment used during Riot control operation.
- Its weight is approx 6.5 kg.
- It is available in small, medium and large size and in customized colour.
- Stab and impact protection : Meets standards VPAM KDIW 2004:18/05/2011. Impact attenuation of above 80%.
- Components : Chest protector, Shoulder Pad, Upper Arm guard, Elbow & Fore Arm guard, Thigh/Pelvic guard, Groin guard and Anti-riot Helmet.
- Ergonomically designed for maximum wearing comfort, with adjustable elastic straps for perfect fit.

# BOMB SUPPRESSION BLANKET

## FEATURE

- Combination of Bomb suppression Blanket & safety ring gives protection against blast shocks, debris and fragments.
- Designed at par with MHA GSQR.
- Overall weight varies from 20 kg to 38 kg.
- Designed to easily cover suspected device of size 40cmx30cmx40cm.
- Offers protection against 2 kg TNT blast and fragments with velocities ranging from 407m/s to 665m/s.



# SLEEPING BAG AND MATTRESS

## LIGHT WEIGHT SLEEPING BAG (-50°C)



### FEATURE

- Developed for use in Extreme Cold Climate at High Altitude, Snow Bound, Glaciated and Wind Chill Climates.
- Usable upto -50°C with Wind Velocity of 40 km/h.
- Fully indigenous raw material used.
- Very handy and light weight (4.2 kg approx.).
- Adequate ventilation and easy maintainability.
- Useful shelf life of more than two years.
- Skin friendly breathable material.

## LIGHT WEIGHT SLEEPING BAG (-20°C)



### FEATURE

- For Protection / Comfort to the users in high altitude area upto -20°C temperature.
- Fully Indigenous raw material used.
- Skin friendly breathable material.
- Light weight (2 kg max).

## LIGHT WEIGHT SLEEPING BAG (+8°C)



### FEATURE

- For Protection/Comfort to the users in lower Himalayan region at temp. upto +8°C.
- Fully indigenous raw material used.
- Skin friendly breathable material.
- Light weight (650 gm max).

# MATTRESS MK II (IMPROVED VERSION) WITH COVER

## FEATURE

- A Portable Light weight Mattress.
- Protects from cold and damp ground.
- Useful for camping and usable in high altitude area.
- Polyester Insulation Filling Material.



# SYNTHETIC CAMOUFLAGE NETS (SCN)

## FEATURE

- For special operation forces, snipers and forward operation forces in high risk areas.
- Customized size and shape.
- Available in various combi-nations for Desert, Jungle and Snow Bound Area.

# MULTI-SPECIAL CAMOUFLAGE NETS (MSCN)

## FEATURE

- For camouflaging critical designated equipments such as Critical weapons/equipments/vehicles/radars etc deployed in the operational area against Visual, NIR, TIR and Radar based detection sensors in conjunction with the terrain considerations.
- To reduce the chance of recognition against aerial and ground based Electro-magnetic (EM) sensors.
- Reversible and lend itself for usage in two different contiguous terrains with one side for Plain/Jungle terrain and the reverse side for Desert/Semi-Desert terrain.
- Includes support system with telescopic poles, spreader on Top & Metallic Foot at the base and Repair kit with Net swatches, mesh cord, tie cords, threads etc.

## BASIC MATERIAL

- Material with matt finish with maximum gloss value of 6 when evaluated under laboratory conditions against IS:101 (Part 4/Section 4)-1988.



# TENTS

## TENT EXTENDABLE FRAME SUPPORTED (TEFS)



### BASIC MATERIAL

- Fabric PV Dope Dyed 410 GSM OG WP.
- Fabric PV Dope Dyed 205 GSM Green WP.

### FEATURE

- Modular Shelter System.
- Available in 2 sizes - 4M and 2M.
- Dimensions:  
4M:4.66 m x 4.05 m x 2.85 m.  
2M:4.66 m x 2.05 m x 2.85 m.
- Flooring: Fire Resistance TPO.
- Modular Frame Structure of Aluminium Alloy and Mild Steel Joints.
- Extendable Length in the multiples of 4M/2M.
- Can be easily mounted and dismantled.

## TENT EXTENDABLE FRAME SUPPORTED FIRE RETARDANT

### FEATURE

- Modular Shelter System.
- Available in 3 sizes - 8M, 4M and 2M.
- Dimensions:  
8M:4.66 m x 8.05 m x 2.85 m.  
4M:4.66 m x 4.05 m x 2.85 m.  
2M:4.66 m x 2.05 m x 2.85 m.
- Flooring: Fire Resistance TPO.
- Modular Frame Structure of Aluminium Alloy and Mild Steel Joints.
- Extendable length in the multiples of 4M/2M.
- Can be easily mounted and dismantled.

### BASIC MATERIAL

- Duck P/C Blended  
50/50 Ripstop 425  
GSM.
- WR, WP & FR.



# MEDICAL TENT WHITE ANTI-MICROBIAL

## FEATURE

- Modular Shelter System & Temporary makeshift isolation arrangement for pandemics.
- Made with Anti-Microbial Fabric for Better Hygiene.
- Can be used as an isolation ward.
- Available in 2 sizes - 4M and 2M.
- Dimensions:
  - 4M: 4.66 m x 4.05 m x 2.85 m.
  - 2M: 4.66 m x 2.05 m x 2.85 m.
- Flooring: Fire Resistance TPO.
- Modular Frame Structure of Aluminium Alloy.
- Joints: Mild Steel.
- Extendable Length in the multiples of 4M/2M.
- Can be easily mounted and dismantled.

## BASIC MATERIAL

- Fabric PV Dope Dyed 410 GSM White WP Anti Microbial.



# TENTS

## TENT ARCTIC SMALL



## FEATURE

- Usable in High Altitude Area as well as in Green Terrain.
- For 1 to 2 persons.
- Can be used for Camping purpose.

## BASIC MATERIAL

- Fabric Cotton Closely Woven 170 GSM Dual Shade W.R.
- Cotton Fabric Scoured 60 GSM for S.D. Parachute.
- Rubberised Fabric for Tent Flooring.

# TENT ARCTIC MEDIUM MK-II



## FEATURE

- Usable in High Altitude Area as well as in Green Terrain (Reversible Outer Fabric - White and Olive Green).
- Can be used as office, restroom etc.
- Suitable for 4 to 6 Persons.
- Equipped with 01 Bukhari, a space heating device for heating.

## BASIC MATERIAL

- Cloth Cotton Closely Woven 235 GSM Dual Shade.
- Cotton Fabric for Supply Dropping Parachute Scoured Type 1.
- Fabric Rubberised for Tent Flooring.

# TENT ARCTIC LARGE

## FEATURE

- This is a dual-shade, reversible, conical rectangular Tent.
- This is used in snow/green vegetation terrain in high altitudes and extreme cold climates for accommodation/office purpose.

## BASIC MATERIAL

- Duck Cotton 610 GSM Dual Shade (O.G/White).
- Dossuti Scoured.
- Flannelette Lining Brown.



# TENT HIGH ALTITUDE

## FEATURE

- Useful in Snow Bound areas and High glaciated terrains.
- Has a capacity of accommodating 10-12 Men.
- Handy and can be carried easily.
- Made up of high strength metallic frame for better stability against high wind velocity and blizzard.

## BASIC MATERIAL

- Fabric Polyester 650 GSM PVC Coated White.
- Fabric Polyester 650 GSM PVC Coated Grey.
- Fabric Nylon knitted aluminized.
- Non-woven Polyester fabric.
- Nylon tapes of various sizes.



# PUP TENT

## FEATURE

- It can accommodate 2 persons comfortably.
- Can be used by Armed Forces, Mountaineering enthusiasts and camping lovers.
- Easy to install and can be set up within few minutes.
- Compact design for carrying in Back Packs.
- Provided with Netting mesh to prevent from insects and mosquitoes & allowing better air flow.

## BASIC MATERIAL

- Water repellent Nylon fabric of 100 GSM (Green color) and 115 GSM (Orange color).
- Ground sheet fabric: 140 GSM OG WR.
- Nylon Netting Mesh.
- Basic structure is made up of Glass fibre pipes for light weight and high strength.
- Dimension of tent (Medium size): 1.8m x 1.8m x 1.3m.



# SPACE HEATING DEVICE (BUKHARI)

## FEATURE

- Energy Efficient.
- Two chambered structure to prevent mixing of flue gases with fresh air.
- Multi-utility (heating and cooking).
- 12 V, 20 W solar panel and battery system with a backup of 8 hours for fan.



# WATER TANKS TANK FABRIC COLLAPSIBLE

6140 LTRS.



CHAGUL3 LTRS.



230 LTRS.



## FEATURE

- Made up of natural flax canvas.
- Keeps water cool in hot climate.
- Anti-microbial property.



# SKID BOARD FOR MI-8 HELICOPTER

## FEATURE

- 1508mm x 829mm (Cargo Platform).
- 1500mm x 750mm (Skid Board).
- For dropping goods in mountain region.
- Weight upto 650 kg in Cargo Platform & upto 450 kg in Skid Board can be dropped.
- Made with Chir Batten and Plywood.

SKID BOARD

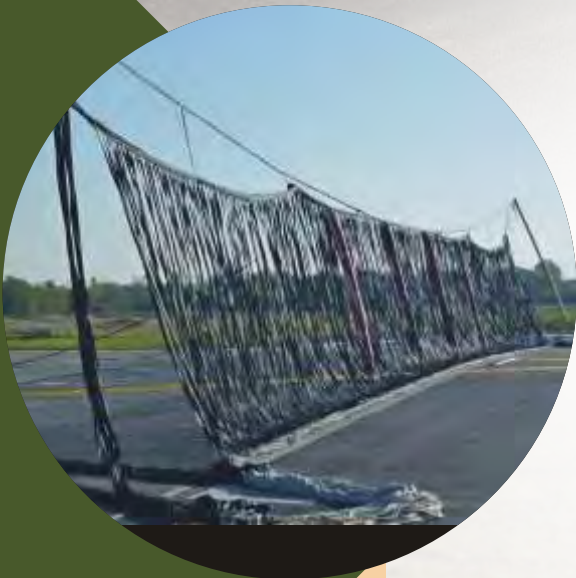


# PLATFORM CARGO AERIAL DELIVERY FOR AN-32



CARGO PLATFORM

# MENA- MULTIPLE ELEMENT NET ASSEMBLY



## FEATURE

- Aircraft Arrestor Barrier System.
- Arresting solutions for combat aircrafts during landing and take-off overrun.
- Two variants:  
MENA 30 – for 6 to 20 Ton Class Aircraft.  
MENA 40 – for 20 to 40 Ton Class Aircraft.
- Can engage both hook and non-hook equipped aircraft.
- Can be installed across the runway with operational readiness time as low as 3-5 sec.

## PRODUCT SPECIFICATION

PARAMETERS	MENA TYPE 30	MENA TYPE 40
Width	: 58 m (Loop to Loop)	58 m (Loop to Loop)
Suspended Height	: 3.7 + 0.2 m	4.7 + 0.2 m
Weight (Approx)- Dry	: 562 Kg	695 Kg
Wet	: 686 Kg	848 Kg
Breaking Strength- Vertical	: 3135 kg (Min)	3135 kg (Min)
Horizontal	: 2040 kg (Min)	2040 kg (Min)



**SHIRT LIGHT BLUE (H/S)**



**SHIRT LIGHT BLUE (F/S)**



**TROUSER BLUE GRAY**

#### **FEATURE**

- Plain weave fabric with 67% polyester & 33% viscose blond to enhance lusture, lesser wrinkle formation during use.
- Dope-dyeing process adopted to minimize shade variation.
- Shirts are provided with a pair of chest pockets covered by fused triangular flaps.
- Shirts are provided with front opening with button and buttonhole arrangement.
- Trousers are provided with three mittered end type loops with metal hook & eye at two side seams and back to hold the waist belt.

# AIR CREW VEST & DRAWERS

## FEATURE

- Can be used by Air Force personnel during summer & light winter.
- Anti-microbial, Anti-fungal, Anti-bacterial, Anti-viral, Skin friendly, Anti-UV and Non-Toxic.
- Flame Retardant (Class 1 fabric as per ASTM D 1230).
- Light in weight & comfortable.
- Thermo-regulation property.
- High breathable with moisture wicking properties, quick dry capability.
- Maintain its integrity not sag due to usage.



# JERSEY WOOLLEN OG/KHAKI

## FEATURE

- 100% pure virgin wool of superior quality 64's grade wool with minimum fibre length of 80mm.
- Cloth plain weave polyester & viscose dope dyed OG (Reinforcement of sleeves, shoulder, shoulder strap & pen pockets).
- Good warmth, soft feel & comfortable.
- Good colour fastness, washing & perspiration.
- This product is 'WOOLMARK' certified.



# SHIRT & TROUSERS P/W POLY & VISCOSE DOPE DYED OG/KHAKI

## FEATURE

- Cloth plain weave polyester and viscose dope dyed 150cm Dark OG / Khaki / White / Light blue / Light Blue Grey (Polyester-67% + Viscose-33%).
- Good crease recovery.
- Good abrasion and pilling resistance.
- Good air permeability and water-vapour transmission rate lead to more comfort.



# SHIRT ANGOLA

## FEATURE

- Body and all other components of this product are made of Shirting Angola Drab Poly-Wool (50:50).
- Superior quality 64's grade Wool.
- Good warmth.
- Soft feel.
- Good colour fastness to light, washing & perspiration.



# TROUSER BD SERGE

## FEATURE

- Trousers serge is manufactured with serge battle dress Poly-wool (Polyester-20% and Wool-80%).
- Superior quality 64's grade Wool.
- Good warmth.
- Soft feel.
- Good colour fastness to light, washing & perspiration.

# CANOPY TOP



## FEATURE

- Assembly Canvas Cover for LPTA 713-VFJ being used by Indian Army.
- Manufactured from Canvas Cotton Special WP OG Vet Dyed 680 GSM Rot Proof Fabric.
- Can be used from both sides (rear & front) and tied on the top of vehicle.



# SADDLERY EQUIPMENTS



- Complete range of Saddlery Equipment for Horses and Camels such as Saddle SU Pattern 02 & Saddle PA Universal and other accessories of Saddles such as Bar Slide Shaped Off/Near, Flap Off/Near, Attachment V Girth Off/Near, Strap Girth, Head Stall GS, Collar Head PA, Breachings, Reins, Lining Felts.
- Basic Material: Leather Harness Buffalo confirming to IS: 580.
- All saddlery equipments are hand stitched with flax thread.

## HORSE SADDLE

### FEATURE

- Horse Saddle makes the perfect choice training aid.
- All hardware is stainless steel.
- Saddle is made of The soft leathers are great quality.
- Heavy reinforced stitching for durability.







## HEAD STALL

### FEATURE

- Headstall has a rugged design perfect for working or training. Premium Canyon Rose harness leather is dipped in oil, dressed with saddle butter and hand rubbed for the ultimate in performance and beauty, with non-rust hardware that stands up to extreme riding conditions.

## HORSE BRIDLE

### FEATURE

- Horse bridle is made up of harness leather, single-ply bridle features wheat-colored stitching on the browband and an all leather curb strap.

