

PAKISTAN DEFENCE EXPORT PORTFOLIO

AEROSPACE / LAND / MARITIME / MISSION SYSTEMS



MASTER CATALOGUE / 2026 EDITION

One controlled portfolio spanning aircraft, autonomous systems, armoured platforms, naval capability, weapons, ammunition and soldier systems.

AEROSPACE

AUTONOMY

C4ISR

MARITIME

LAND SYSTEMS

WEAPONS

SOLDIER SYSTEMS

PROGRAMME SERVICES

A controlled capability reference built for institutional review

EDITION	September 2026 - professional publication edition
PURPOSE	Business-development and capability reference for authorised institutional engagement
STATUS	Controlled ISDELA portfolio; product availability and configuration remain subject to confirmation
EXPORT CONDITION	All enquiries remain subject to Government of Pakistan approvals, end-use controls and applicable law
IMAGE NOTICE	Product imagery is retained for identification and attribution; external publication requires rights clearance

PUBLICATION METHOD

Named products are presented as consistent ISDELA capability pages. Technical content is normalised inside one controlled publication system with coherent navigation, configuration language and release governance.

PORTFOLIO CONTENTS

Each section opens with a detailed scope statement and linked capability index.

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01

AEROSPACE

Aerospace & Aviation

Combat aircraft, training platforms, depot-level maintenance, avionics integration and aerospace engineering support.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

9 named products or source sheets

SECTION STRUCTURE

Combat aircraft / Training platforms / Maintenance, repair & overhaul / Avionics & engineering

Aerospace & Aviation

Index 1 of 1 / select any entry to open it

SECTION SCOPE

Combat aircraft, training platforms, depot-level maintenance, avionics integration and aerospace engineering support.

ISDELA PORTFOLIO

9 INDEXED CAPABILITIES

CLICK ANY CARD TO OPEN

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JF-17 Thunder family



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Single-engine multirole combat-aircraft family produced by ISDELA.

PUBLIC CAPABILITY HIGHLIGHTS

- Multirole fighter platform
- Supersonic class
- Single-seat and dual-seat configurations
- Support package tailored to customer requirements

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

JF-17 MRO



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Depot and through-life support capability for the JF-17 family.

PUBLIC CAPABILITY HIGHLIGHTS

- Airframe and systems support
- Scheduled and unscheduled maintenance
- Repair, overhaul and technical services

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

K-8 Karakoram



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Two-seat intermediate jet trainer with light-attack potential.

PUBLIC CAPABILITY HIGHLIGHTS

- Tandem-seat training aircraft
- Intermediate and advanced flying training
- Customer-specific avionics and support options

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

K-8 / trainer MRO



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Maintenance and engineering support for trainer-aircraft fleets.

PUBLIC CAPABILITY HIGHLIGHTS

- Airframe and component support
- Inspection, repair and overhaul
- Training and technical support options

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

MFI-17 Super Mushshak



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Primary flight-training and light utility aircraft.

PUBLIC CAPABILITY HIGHLIGHTS

- Side-by-side primary trainer
- Basic flight and instrument-training roles
- Training, spares and support packages available

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Mirage III/V support



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Legacy fast-jet maintenance, repair and overhaul capability.

PUBLIC CAPABILITY HIGHLIGHTS

- Airframe and systems support
- Component repair and overhaul
- Life-extension and sustainment services

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

F-7 / C-130 support



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Selected aircraft, engine, propeller and component sustainment capability.

PUBLIC CAPABILITY HIGHLIGHTS

- Depot-level support
- Component and propeller services
- Technical support against agreed scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Avionics production & integration



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Avionics engineering, production, integration and test support.

PUBLIC CAPABILITY HIGHLIGHTS

- System integration
- Test and qualification support
- Customer-defined avionics packages

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

General engineering



PORTFOLIO CATEGORY

AEROSPACE

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Precision engineering and aerospace manufacturing support.

PUBLIC CAPABILITY HIGHLIGHTS

- Manufacturing and repair services
- Tooling and test support
- Programme-specific engineering

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

02

MISSION SYSTEMS

Autonomy, Missiles & Mission Systems

Precision effects, guided weapons, unmanned platforms, mission payloads, maritime systems and operational support solutions.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

53 named products or source sheets

SECTION STRUCTURE

Precision effects / Air-defence & missiles / Unmanned systems / Maritime mission systems / Training & support

Autonomy, Missiles & Mission Systems

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Autonomy, Missiles & Mission Systems

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SECTION SCOPE

Precision effects, guided weapons, unmanned platforms, mission payloads, maritime systems and operational support solutions.

ISDELA PORTFOLIO

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CLICK ANY CARD TO OPEN

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37 MM Gun Upgradation from Manual to Auto



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

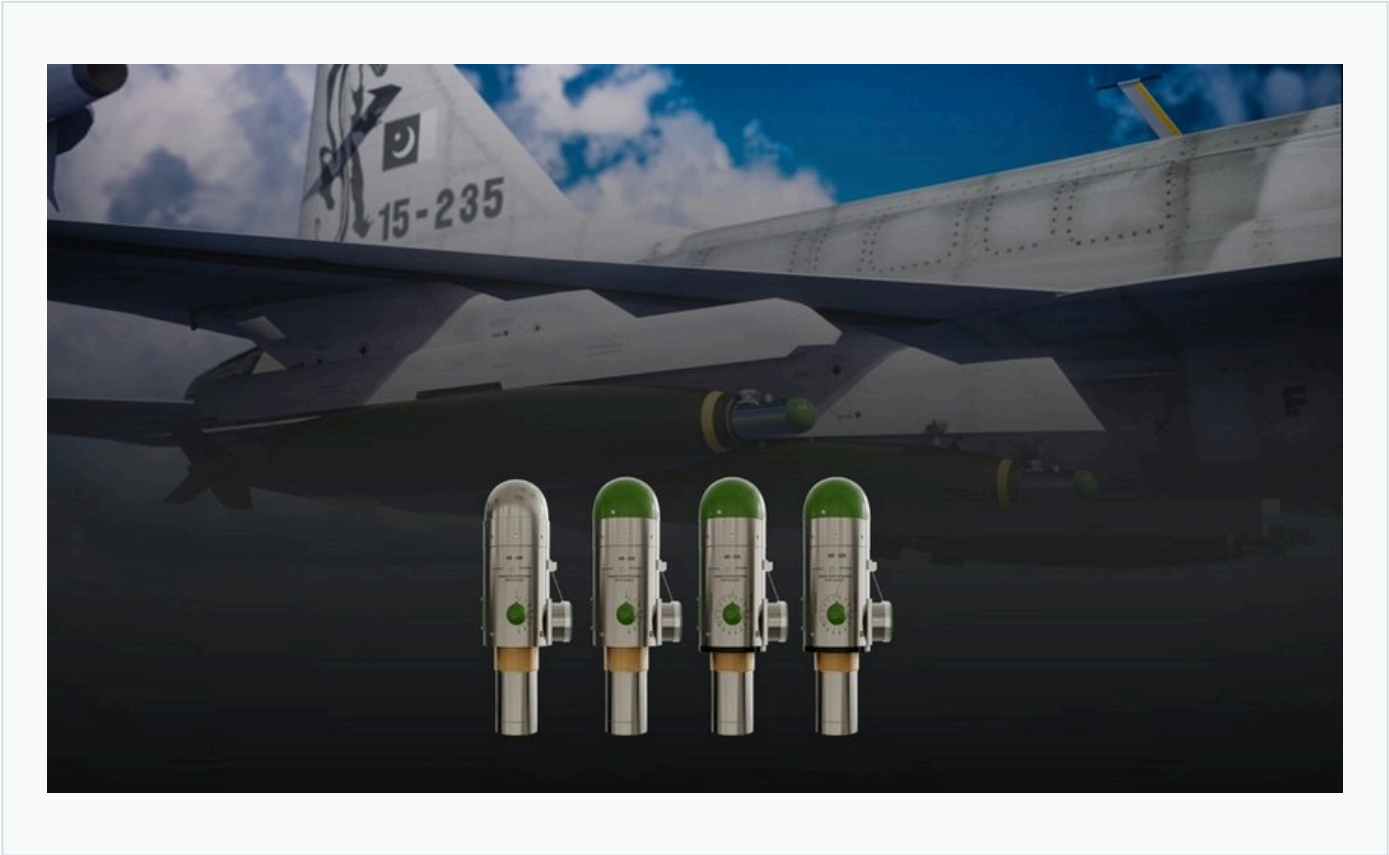
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Sunlight viewable alpha numeric displays
- Provision of interfacing with multiple guns (optional)
- Off Gun tracking of target for stability
- Computer aided leveling

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

AB-SERIES ELECTRIC IMPACT & PROXIMITY FUZES



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Impact Fuzes
- AB-100 - for Low Drag Bombs
- AB-105 - for High Drag Bombs
- Provide instantaneous firing pulse on impact, thus ensuring true surface detonation.

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

AL BATTAAR LASER GUIDED BOMB KIT



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Precision Laser Guidance - Guides onto targets using reflected laser energy provided by the launch platform, external aircraft, or ground designators.
- Broad Target Capability - Designed to engage soft, hard, slow-moving, and stationary targets.
- Versatile Launch Profiles - Supports high/low level, dive, and loft delivery scenarios from NATO aircraft in single or multiple carriage setups.
- 3-Phase Flight Profile - Operates through distinct Ballistic, Acquisition, and Terminal Guidance phases for effective engagement.

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

ANZA MK III (Manpads)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Lightweight design (18.5 kg tube/container) allows one- man shoulder-fired deployment
- Optimized to neutralize low-flying aircraft, combat helicopters, cruise missiles, and UAVs
- Passive IR homing guidance allows operators to relocate immediately after firing
- Multi-mode laser proximity, impact, and graze fuzing ensures lethal detonation near targets

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Attack Ranger (Integrated platform for reconnaissance and strike)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- It's a Multirole (ISR & Strike) UAV System
- Easy to use, highly cost-effective & suitable for field mobile use
- 100 km datalink with integration of 18 x LMs as swarm weapon system
- Can carry EO/IR gimbal with 2 x Attack Ammunition (SkyArrow PGB) at same time

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

AZB-83 PRECISION GUIDED MUNITION



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Autonomous guidance by onboard AHRS aided by GPS processor.
- All weather weapon.
- Capable to accept precise targeting information in WGS-84 coordinates (mission planning or in-flight).
- Environmental standards: MIL STD 810F.

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

BAKTAR SHIKAN (ANTI TANK GUIDED MISSILE WEAPON SYSTEM)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Battlefield tested weapon.
- Produced for inland forces and exported to many friendly countries.
- In service weapon due to Lethality, Reliability and Effectiveness against modern MBTs
- Day & Night Firing

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

BEETLE MORTAR CARRIER QUADCOPTER



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Multiple Mortar Payload Dropping Capability
- Complete Autonomous Operations with Pilot Override Option
- Day/Night ISR Missions
- Handheld GCS for AV and Payload operator

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

BUNKER BUSTER BOMBS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Penetrates four double-reinforced concrete walls/floors, 200 mm thick each
- Penetrates 1.5 m in 35 MPa Reinforced Concrete
- Can be used as effective stand-off weapon with Range Extension Kit
- Compatible with all guidance systems

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

BURQ AIR TO GROUND MISSILE (AGM)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Flexible Target Designation
- Dual Engagement Modes
- Multi-Platform Integration

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

C4I SYSTEMS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Common Operational Picture (2D and 3D)
- Detection
- Tracking
- Identification

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

CBRNE SUIT



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Cutting-edge technology ensures high breathability and minimal physiological burden
- Provide protection against chemical warfare agents for minimum 24 hours (TOP 8-2-501) and 6 hours (TNO-1.2)
- The outer fabric of the suit is available in customizable pattern with properties such as water & oil repellent, flame retardant as well as anti-fungal.
- The inner fabric features embedded carbon sphere for effective and enhanced protection

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

COMINT POD for S-III



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Encapsulated Multi-Role Design
- Wideband Spectrum Scanning
- Signal Analysis & Direction Finding
- Target Localisation

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

DETONICS / CARTRIDGES



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

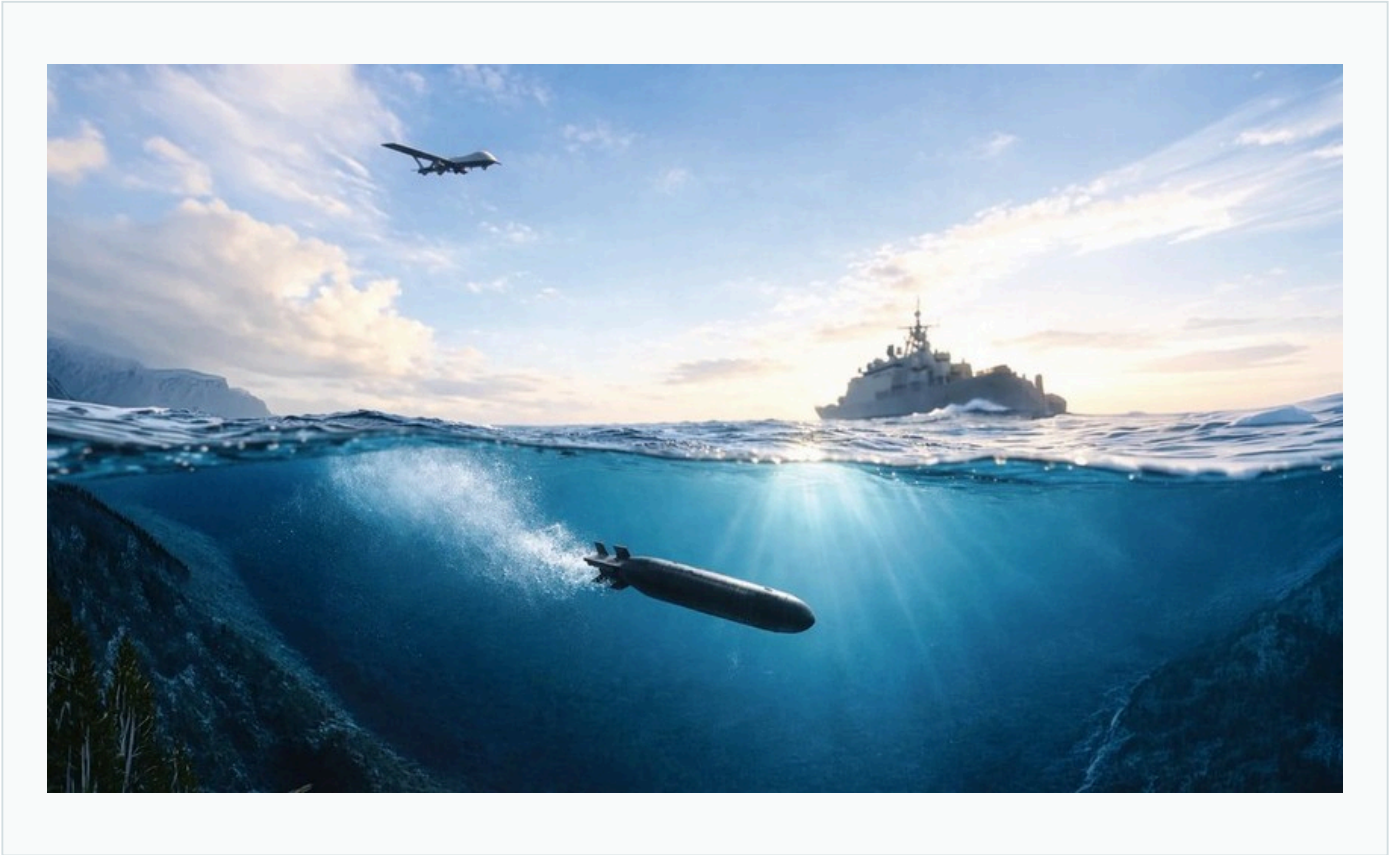
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Impulse Cartridge I-28
- It is used to Fire EOD Kits like D-armor, recoilless water disruptor and rocket wrench Sensor
- Electric Detonator TO-10M
- It is an electrically initiated explosive device which produces required shock waves to initiate secondary detonator

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

EGHRAAQ-UAV BORNE ULTRA LIGHT WEIGHT TORPEDO



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

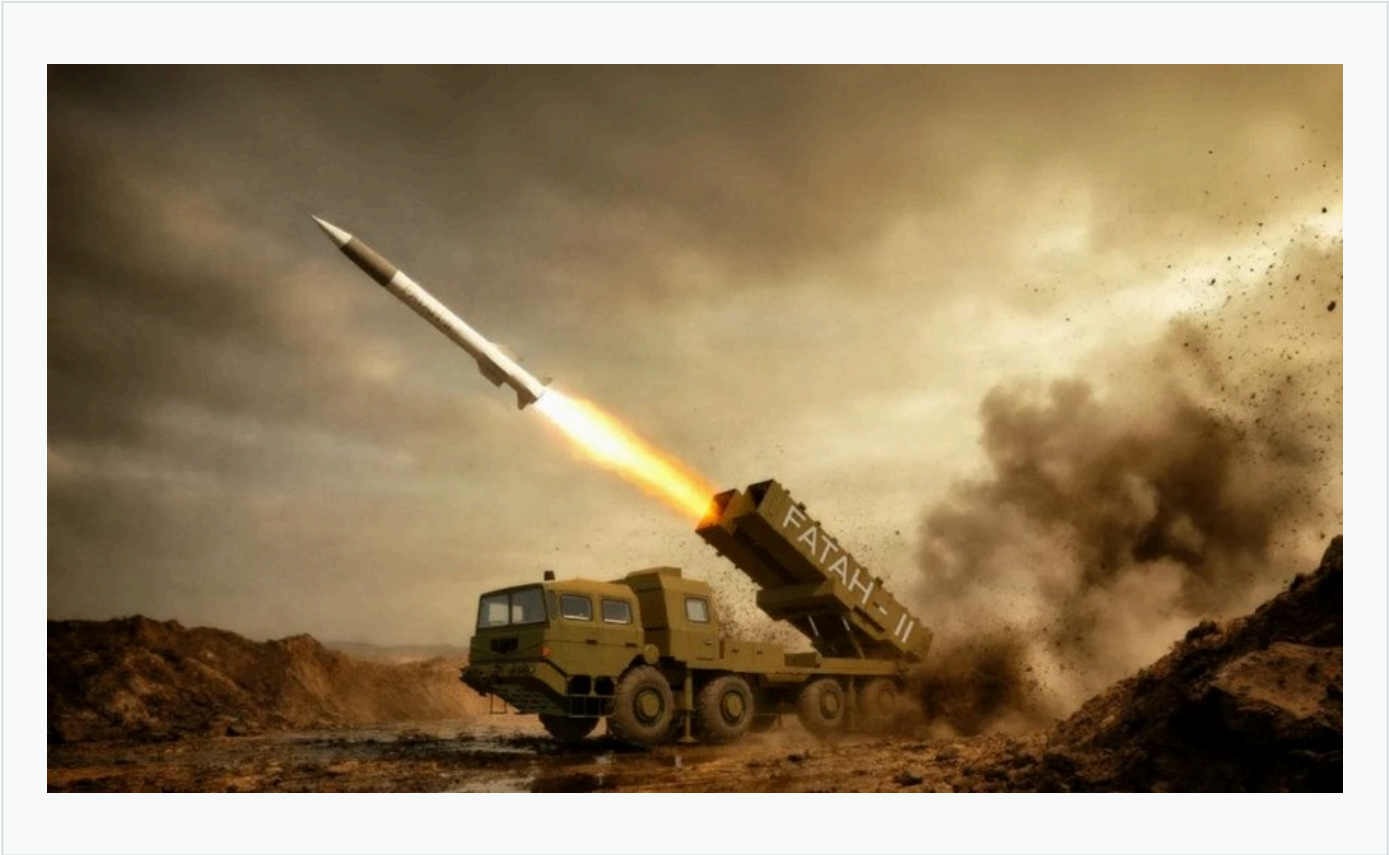
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Redefine ASW doctrine
- Persistent wide area surveillance with on demand engagements
- Rapid response to time critical underwater threats.
- Reduce risk to manned platform in high threat environment

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

FATAH- II (SURFACE-TO-SURFACE MISSILE)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

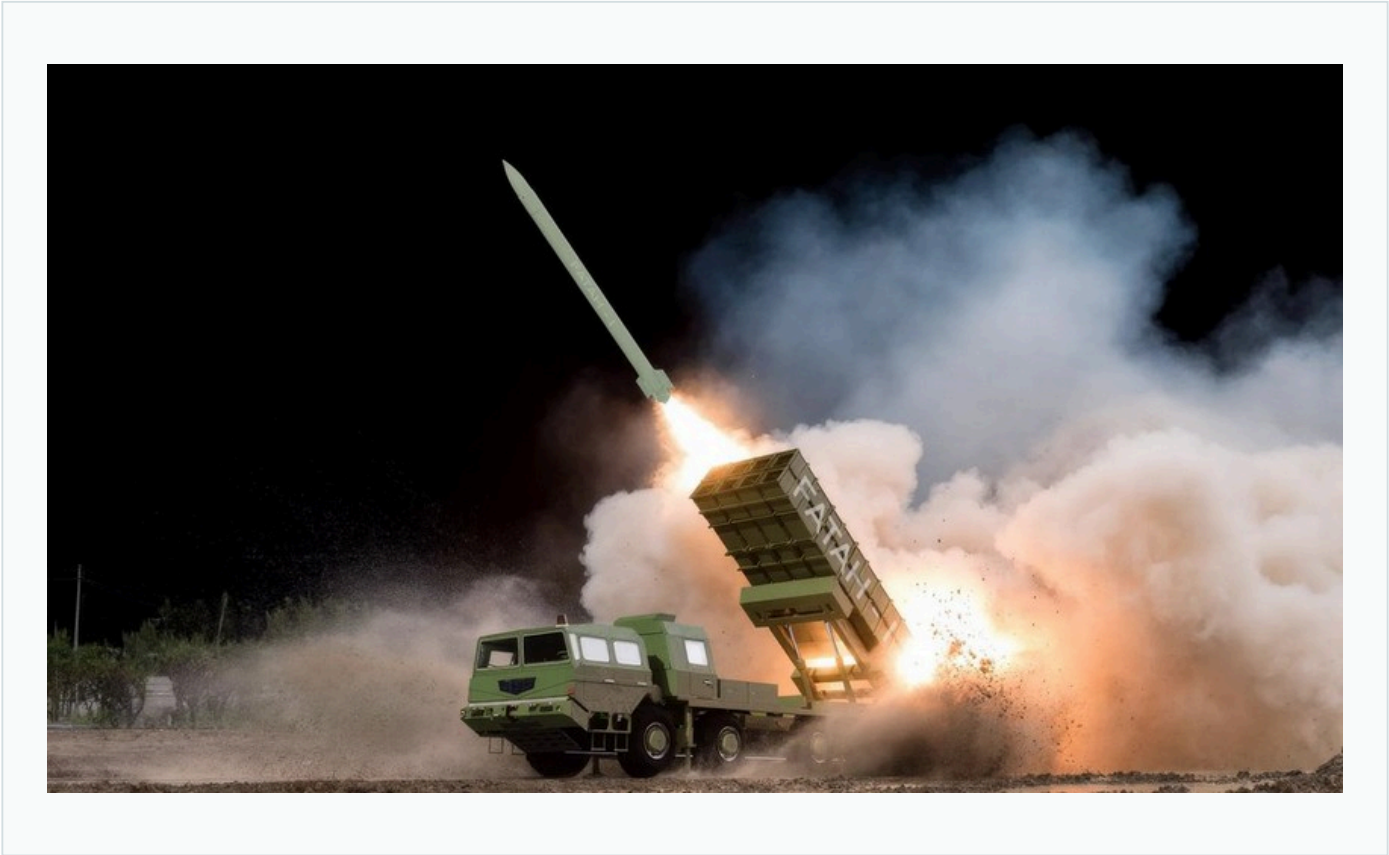
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Single-stage Dual Thrust Solid Rocket Motor
- Unique Programmable Trajectory
- In-flight Manoeuvrability, Guidance till Impact
- Specially Designed Indigenous Thermal Protection System

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

FATAH-I (BATTLE PROVEN GUIDED MULTI LAUNCH ROCKET SYSTEM)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Fast reaction
- Long range
- High accuracy
- Concentrated firepower

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

GP SERIES BOMBS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

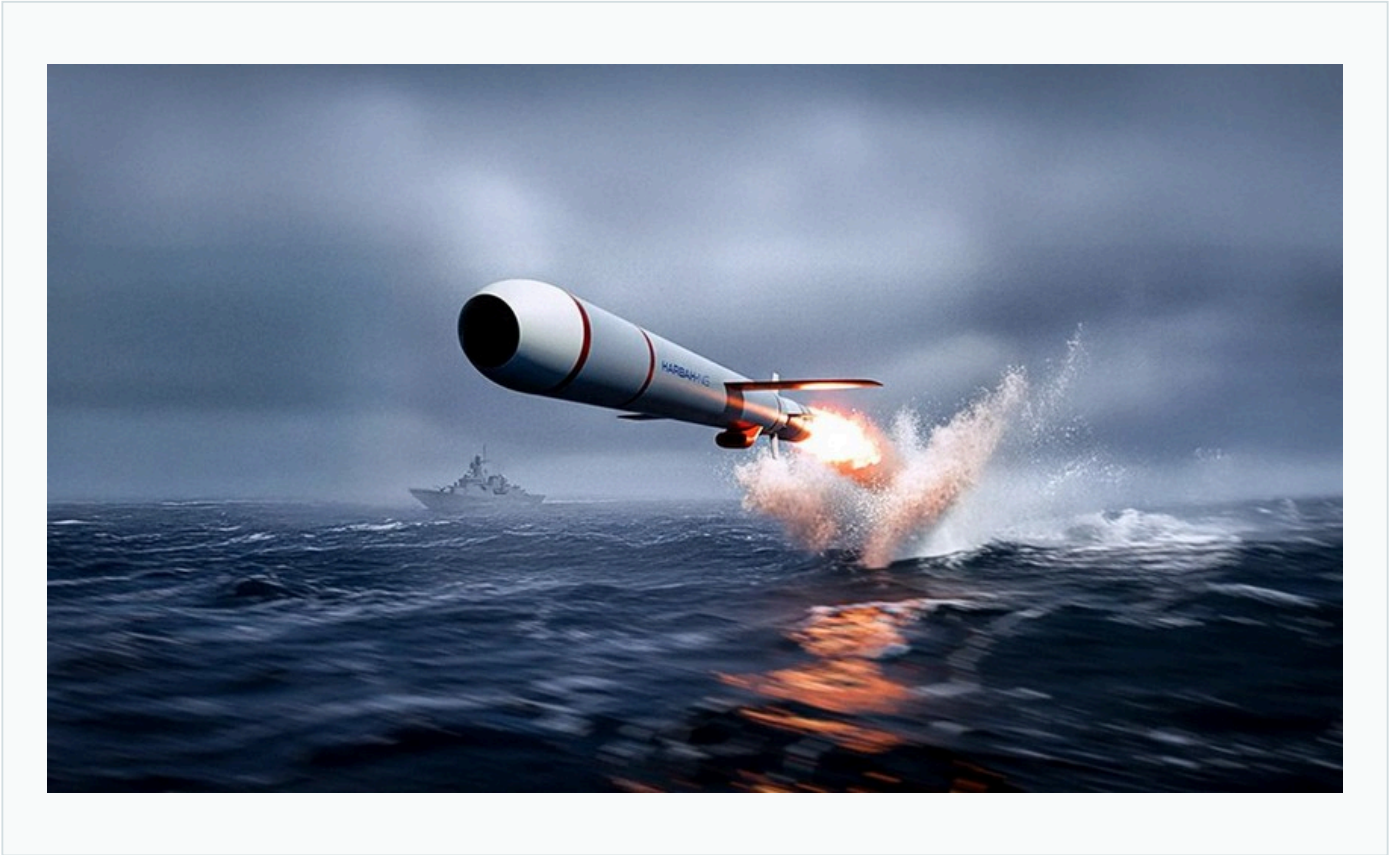
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- General Purpose Steel Bombs
- NATO/Warsaw Standards
- High & Low Drag Configurations
- Qualified on NATO standard's aircraft

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

HARBAH NG (MULTI PLATFORM LAUNCHED CRUISE MISSILE)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

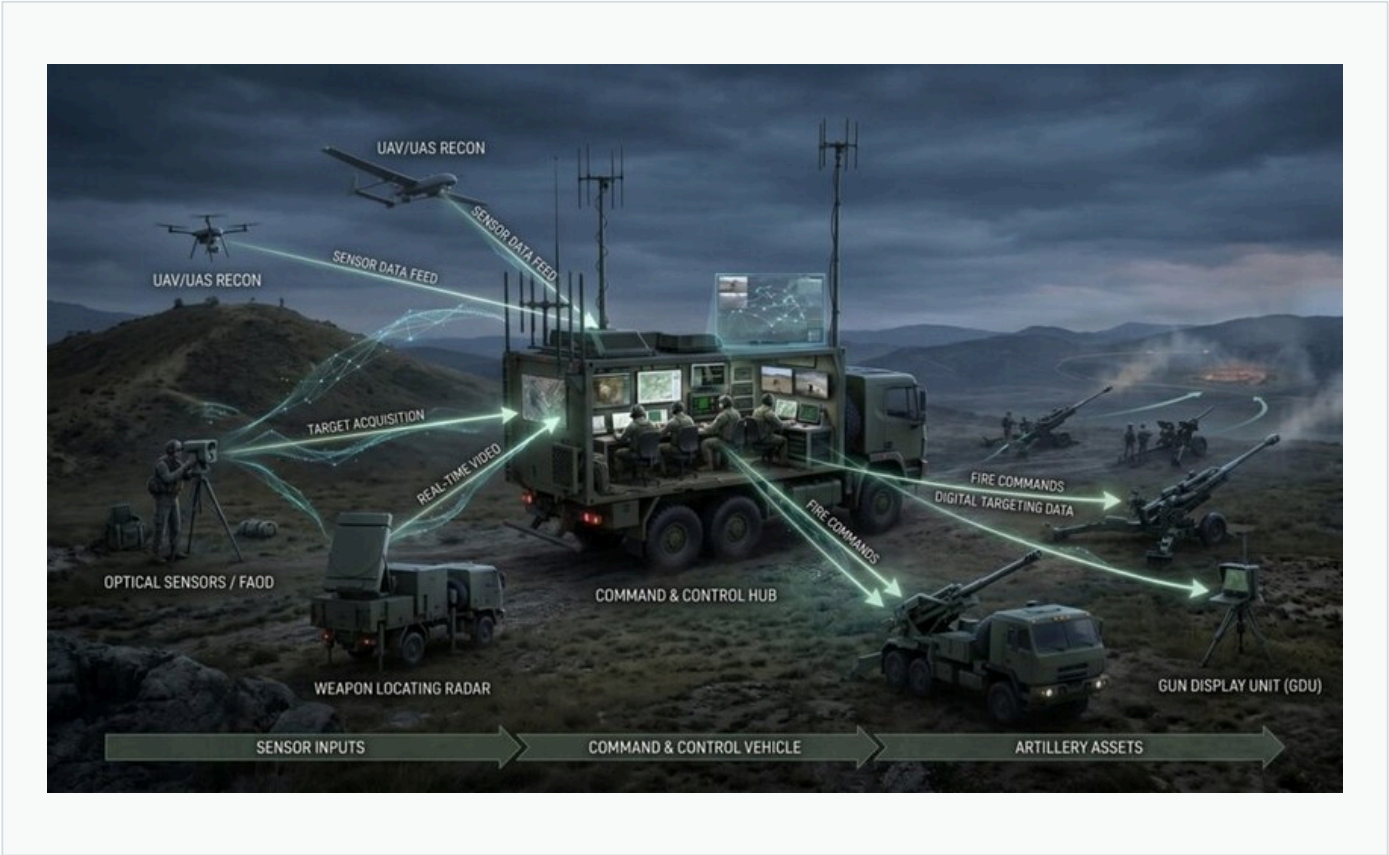
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Medium Range
- Highly Precise Navigation
- All weather Operation
- High Hit Probability

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

IAFCS INTEGRATED ARTILLERY FIRE CONTROL SYSTEM



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Modular and scalable design to integrate any sensor/shooter
- Precise ballistic calculating module for computing gun data
- AI based target locating and detection of fall of shot
- Preparation and dissemination of FSP/DF plans

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Link Green (Tactical Data Link)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

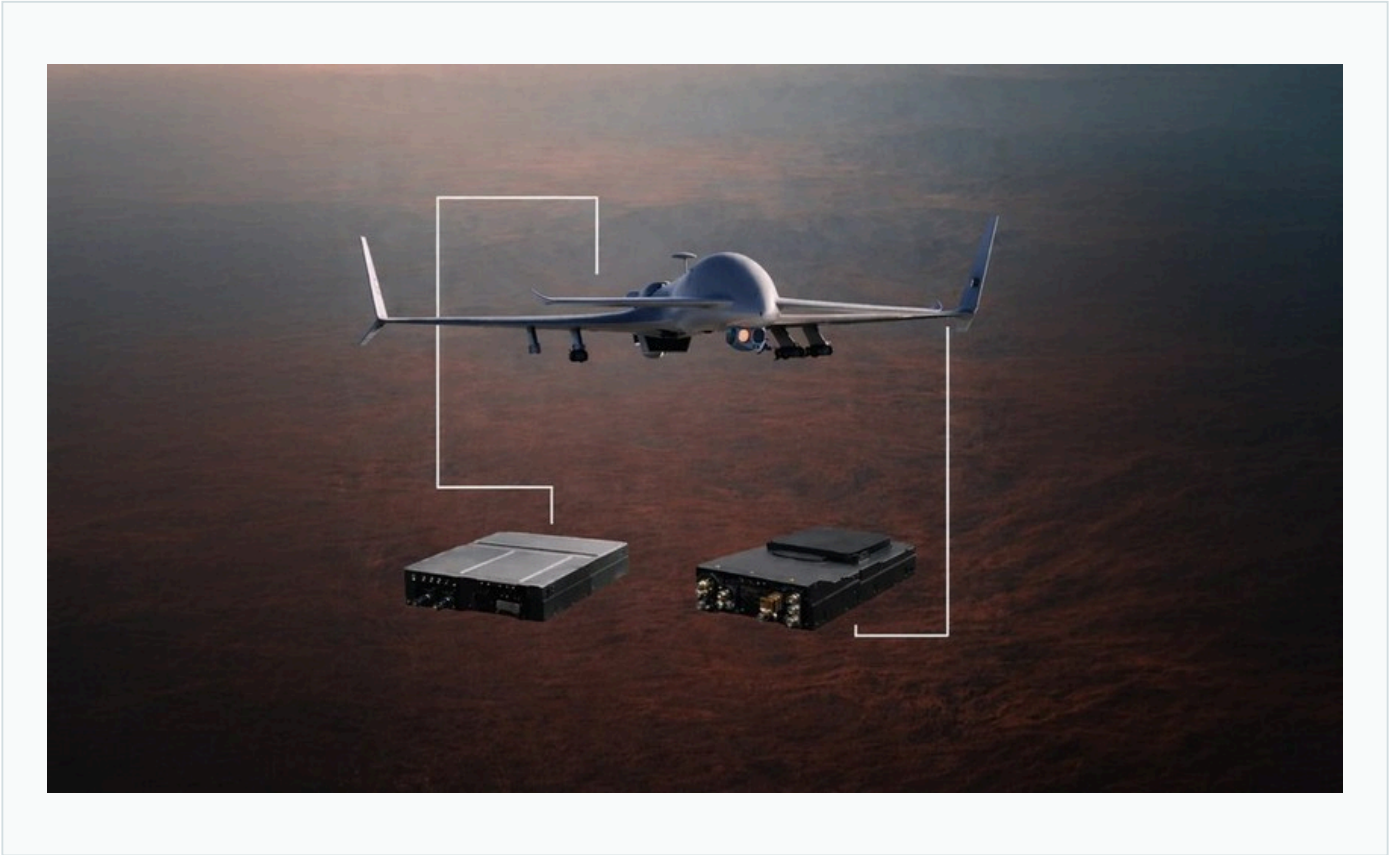
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Ad hoc Network (No Single Point of Failure)
- Multi Network (Super Network) Capability
- Late Network Entry (LNE)
- Automatic Routing and Relay

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

LOW SWAP COMINT PAYLOAD for S-II



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Low-SWaP Modular Design
- Spectrum Scanning & Analysis
- Precision Direction Finding
- Emitter Localisation

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

LRU BASED ELINT SYSTEM FOR AIR PLATFORM



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Interception of known/unknown radar emitters
- High probability of Intercept
- Wide Frequency and DF coverage
- High DF and Frequency accuracies

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

MORTARS LAUNCHERS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Effective Support weapon for short, medium and extended range targets
- User friendly, smooth bore, muzzle loading, reliable in all weather operations
- All type of qualified 81mm ammunitions are usable for operations.
- Dismantled in 3 loads (barrel, base plate, and bipod) for quick transport

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Naval Combat Management System (NCMS - Command, Control, Communication & Intel System)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- AAW, ASuW, ASW & EW
- Advanced Track Fusion & Management
- Threat Evaluation & Weapon Assignment
- AI-Enabled Decision Support System

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Naval Police Boats (MARITIME SECURITY)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Roles of Fast Patrol Boat Law enforcement:
- Prevention or repression of illegal activities
- Rescue operation in inshore waters
- Fast interception and boarding of suspect craft in inshore waters

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Naval Simulators



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Virtual Reality Ship Bridge Simulators
- Ship Bridge Simulators
- War Gaming Simulators
- Generic Sonar Simulators

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

NCW & Combat Systems



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Naval Combat Management System for OPVs/ Frigates/Submarines
- FCS and Torpedo Firing Systems for Surface Vessels/ Submarines
- Tactical Data Link for Naval Platforms
- Combat System Integrator for Offshore Patrol Vessels

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

NISHANA Precision Guidance Kit (PGK)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Improves accuracy
- Reduces the quantity of shells to be fired
- Minimizes collateral damage

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

PASSIVE DIFAR SONOBUOY



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Passive detection
- Frequency analysis
- Direction of target
- Additional Deliverables

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

PASSIVE DIFAR SONOBUOY (G-SIZE)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Passive detection
- Frequency analysis
- Direction of target
- Additional Deliverables

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

POD BASED ELINT SYSTEM FOR UAV's



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

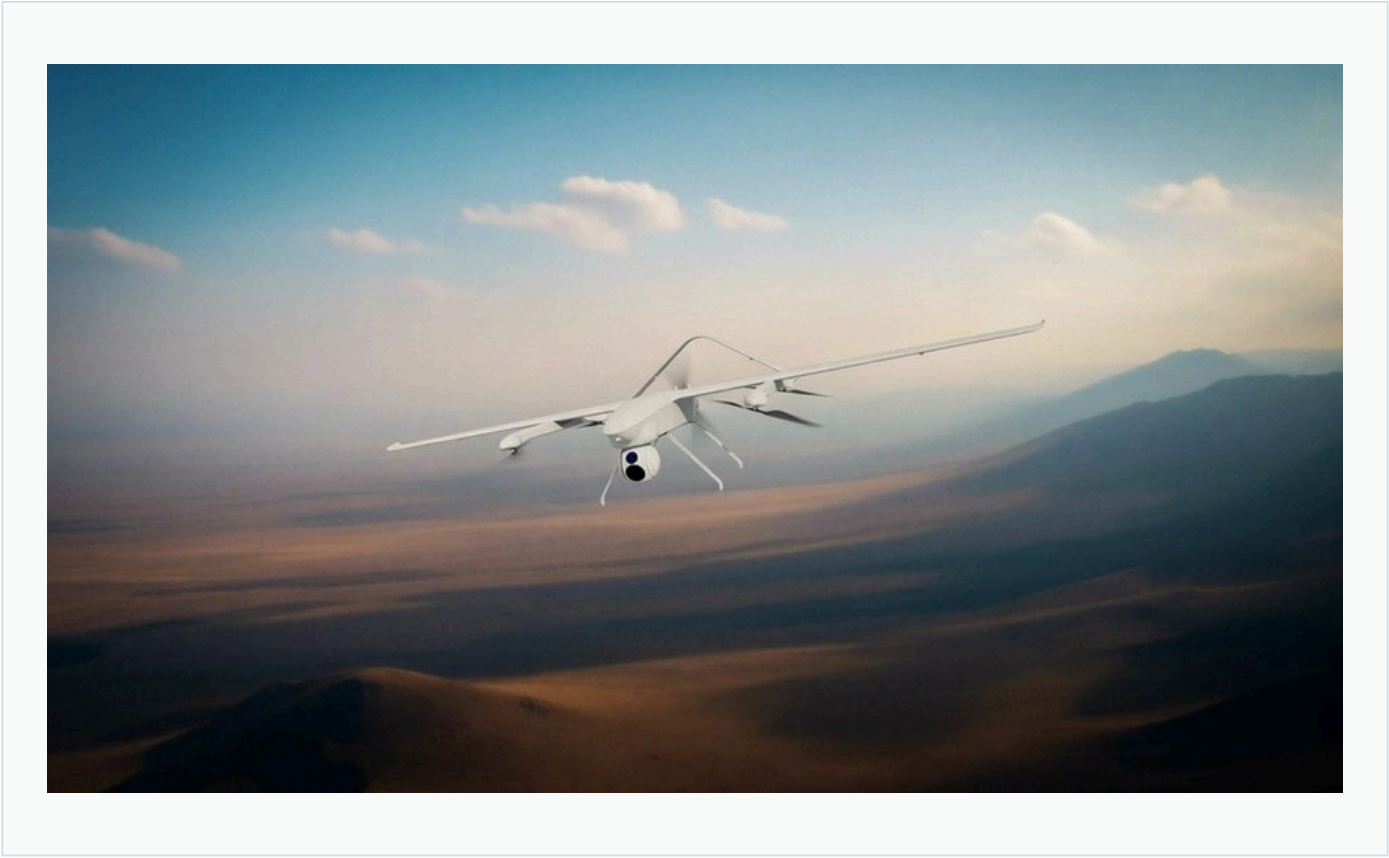
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Interception of known/unknown radar emitters
- High probability of Intercept
- Wide Frequency and DF coverage
- High DF and Frequency accuracies

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

RANGER V50H (HYBRID VTOL STRIKE UAV)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Vertical Take-off & Landing
- Reduced Operational Footprint and transportation loadout
- Covert Missions (low visual & acoustic signature)
- Autonomous Missions

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

RO PLANTS FOR SHIPS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

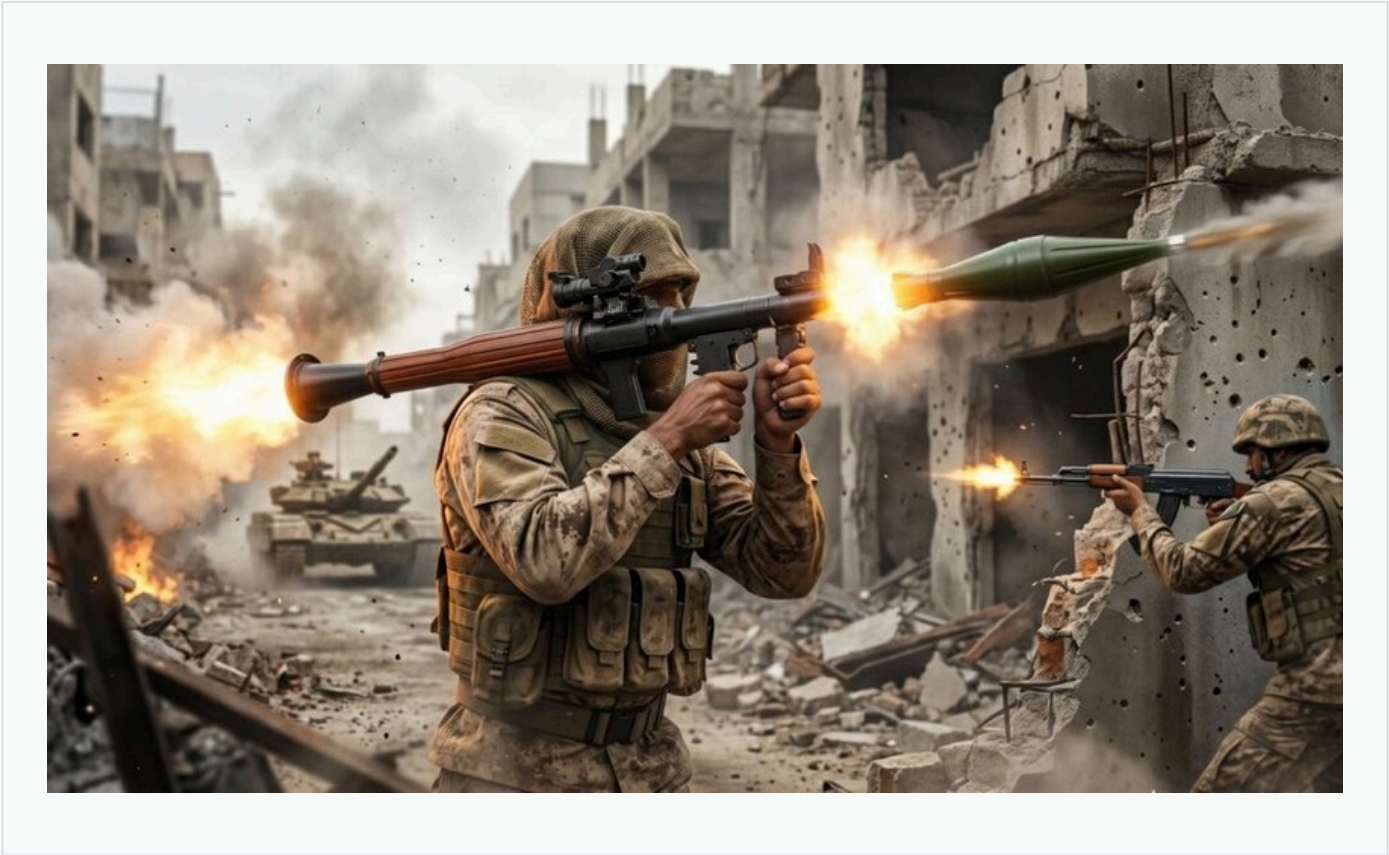
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Fully Automatic/Semi-automatic
- The system can be transported by aircraft /helicopter, truck, or other platforms like rail and ships
- Optimal treatment is achieved by Integrated process equipment
- Latest & state-of-the-art ultraviolet system for removal of harmful bacteria and viruses (optional)

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

RPG (ROCKET PROPELLED GRENADE LAUNCHER)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- A Portable, Re-usable shoulder launched anti-tank Rocket-Propelled Grenade Launcher
- Effective and low-cost weapon widely used for anti-armor and in irregular operations

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SAFRAH-III



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

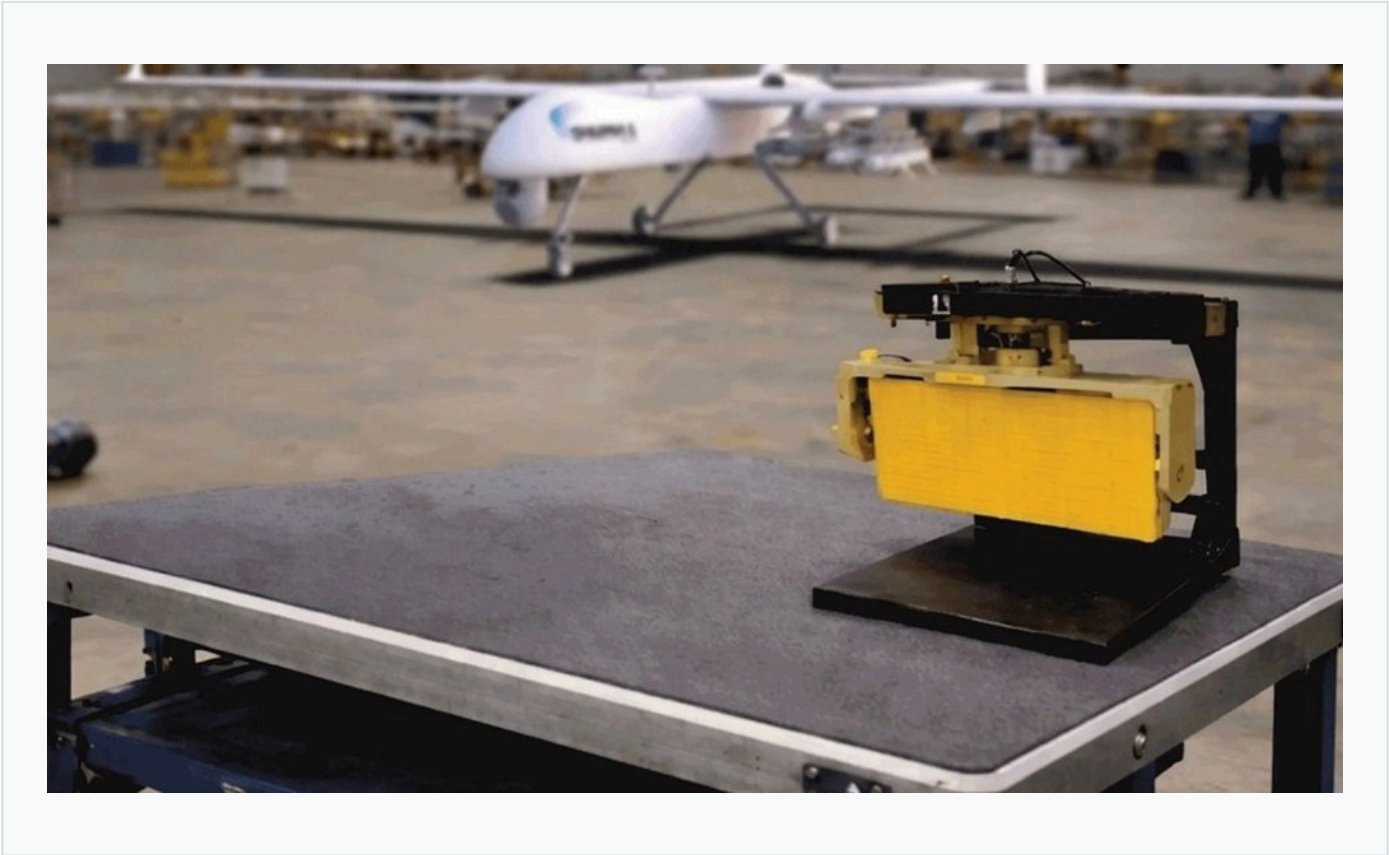
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Cuts off all communication between the drone and the controller.
- UAV ground control cannot receive aerial pictures and videos.
- Capability of jamming the drones with frequency hopping features.
- Disabling RTH of drone thereby forcing it to land (depending upon drone model).

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SAR PAYLOAD (KPM-6030)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- All-Weather & Day/Night Operation - Operates seamlessly through clouds, fog, rain, and darkness using microwave signals.
- Onboard Real-Time Processing - Processes collected radar signals directly on the aircraft for immediate image generation.
- High-Resolution Ground Imaging - Delivers detailed terrain mapping and surface observation with controllable resolution from 0.3 m to 5 m.
- Multi-Mode Imaging - Supports diverse operations including Strip-map, Spotlight, GMTI, MMI, ACD, CD, ISAR, and AMMOD.

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SCOUT MINI QUADCOPTER



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Versatile ISR Capability
- Quadcopter Configuration
- Multiple Flight Modes
- Waypoint Navigation

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SCOUT V30 (E ELECTRIC VTOL)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

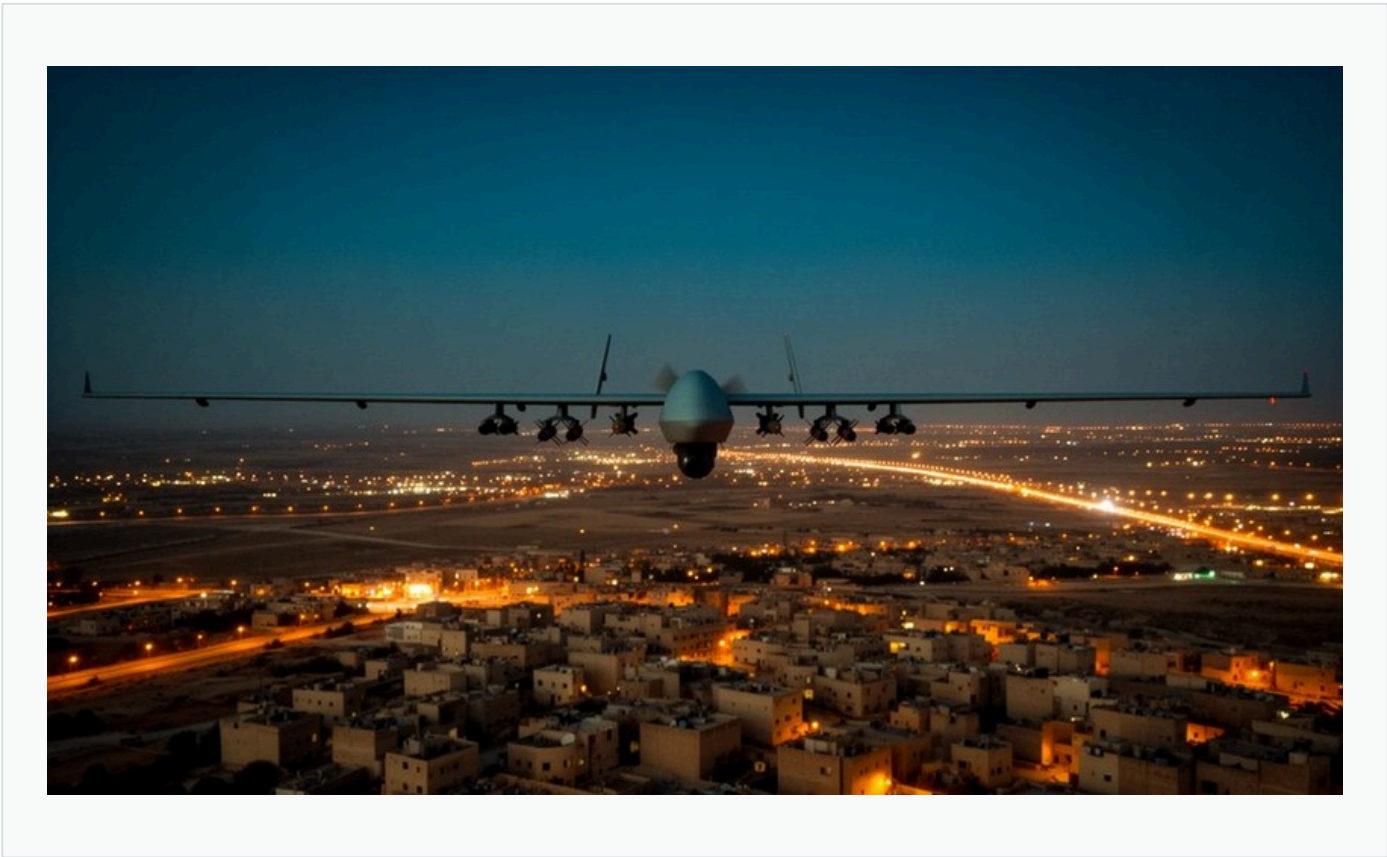
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Vertical Take-off & Landing
- 3.5 Hours Endurance
- Fully Autonomous Missions
- AI Cameras with Auto Detection & Tracking

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SHAHPAR III - GROUP 4+ MALE UCAV



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

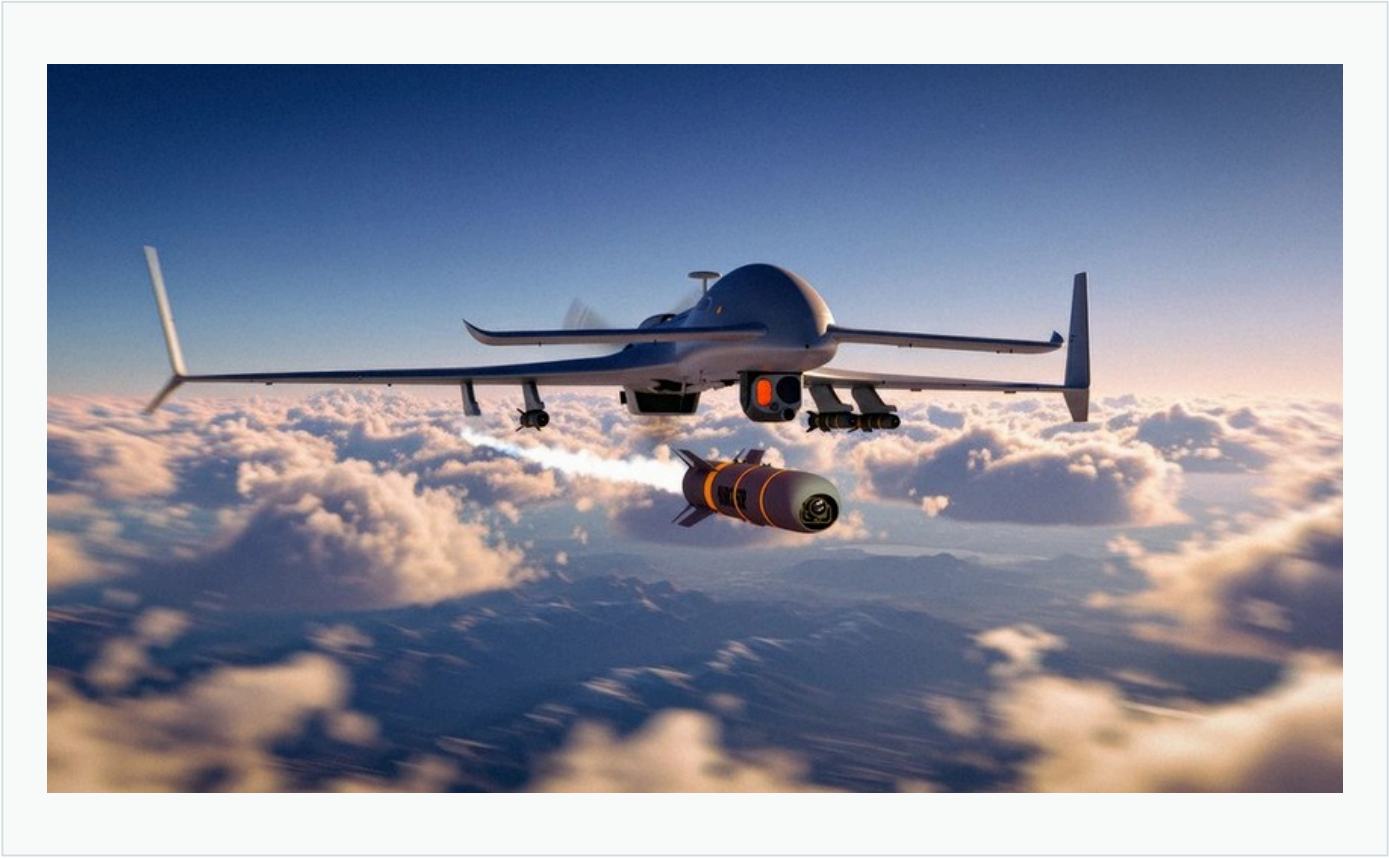
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Multi- role Intelligence, Surveillance, Reconnaissance (ISR),Target Acquisition and Target Engagement (Armed) capability.
- Equipped with ISR Payloads: EO / IR, SAR & SIGINT (COMINT / ELINT).
- Multiple redundant Data - links with 02 x comm links in LOS while 01x comm links in BLOS
- Equipped with ATC Transponder, Identification Friend or Foe (IFF) & Automatic Identification System (AIS).

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SHAHPAR-II (BLOCK-II) BATTLE TESTED - UCAV



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Multi-role Intelligence, Surveillance, Reconnaissance (ISR), Target Acquisition and Target Engagement (Armed) capability.
- Equipped with ISR payloads EO /IR.
- Multiple redundant data links with 02 x comm links in LOS while 01 x comm link in BLOS.
- Equipped with ATC transponder, Identification Friend or Foe (IFF).

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SMASH - ANTI-SHIP BALLISTIC MISSILE



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

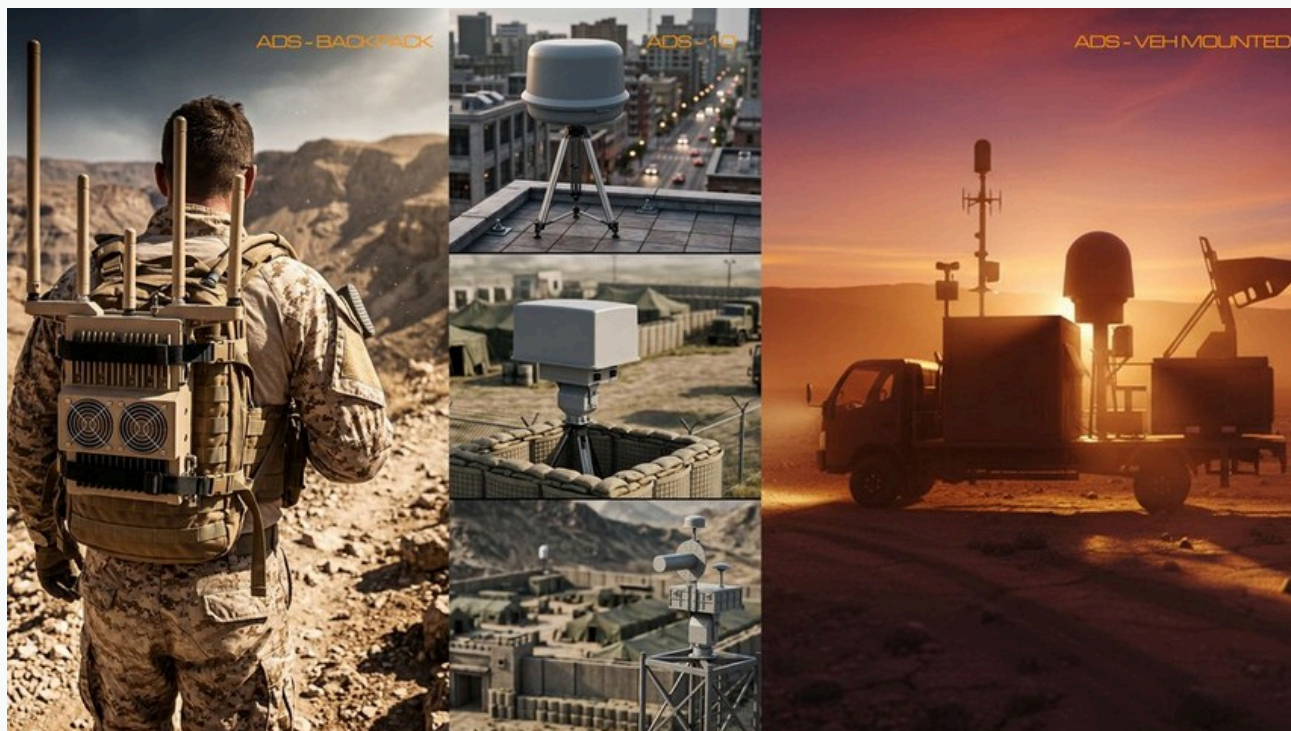
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Single-stage Dual Thrust Solid Rocket Motor
- Unique Programmable Trajectory
- In-ight Maneuverability, Guidance till Impact
- Specially Designed Indigenous Thermal Protection System

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SPIDER ANTI UAV SYSTEM (PORTABLE)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Light weight and quick deployment
- Indigenous modular system architecture
- RF based Drone Detection, DFing & Jamming
- Customizable Form Fit & GUI

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SPIDER ANTI UAV SYSTEM (TRUCK MOUNTED)



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Modular configuration with replaceable LRUs
- Jamming Freq Range: 400 MHz - 6 GHz
- Detection Range: 10 Km □
- Jamming & Spoofing Range: 10 Km □

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SUPER BEETLE MORTAR CARRIER HEXACOPTER



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Carries Multiple Mortars
- Day/Night ISR Missions
- Autonomous with Pilot Override Option
- Handheld GCS Consoles

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SUPER RANGER V150



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- VTOL & Compact Deployment
- Rapid Operational Readiness
- Fully Autonomous Missions
- Indigenous & Customisable Software

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

TAIMOOR CRUISE MISSILE WEAPON SYSTEM



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Long Range
- Highly Precise
- All Weather Operation
- High Hit Probability

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

TIPU WEAPON SYSTEM



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Semi Active Laser Guidance
- Compatible with 155mm Howitzers
- 39 Cal. / 45 Cal. / 52 Cal
- Compatible with NATO / WARSAW compliant Laser Designators

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

USV UNMANNED SURFACE VEHICLE



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- AI incorporated in platform for autonomous navigation in case of communication failure
- AI algorithm in USV will perform
- Obstacle Detection & Classification
- Obstacle Avoidance

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

YALGHAR LOITERING MUNITIONS



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Anti-jamming & anti-spoofing GNSS technology
- Visual base navigation in GNSS denial environment
- Support multiple types of warheads for different roles
- Precision targeting capabilities with AI

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

ZAP FPV AVIATOR



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- Surveillance + Attack Modes
- Auto Lock & Track
- Supports Mortars & RPG Payloads
- Fiber Optic Spool for Jam-Proof Ops

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

ZUMR - II (HD) DAY/ NIGHT SURVEILLANCE & TARGETING PAYLOAD



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

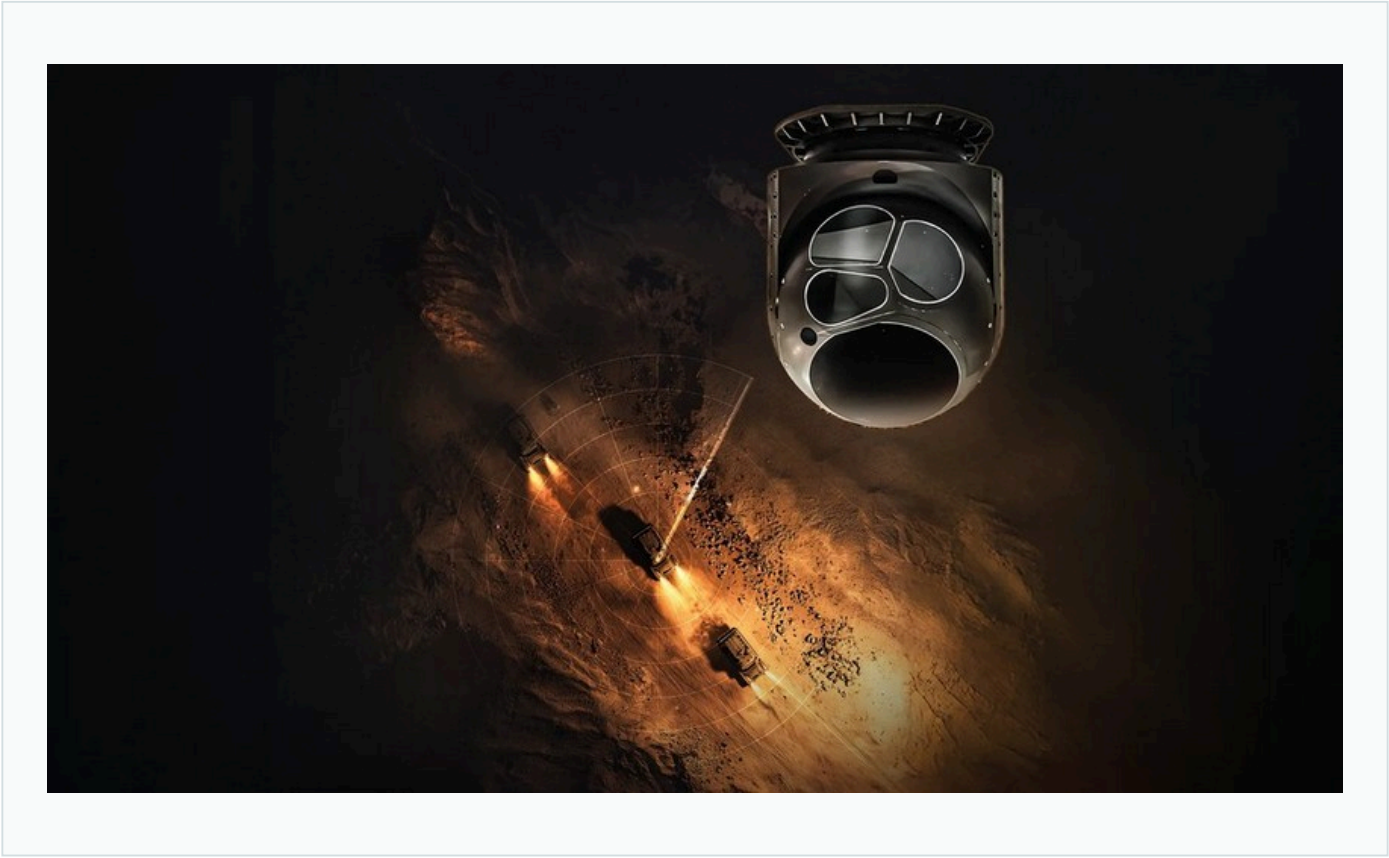
Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- High Definition Surveillance and Targeting System
- HD Thermal Imager, HD Day Imager, HD Low Light
- 4-axes Gyro Stabilized
- 24/7 Mission Capability

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

ZUMR - III LONG RANGE HD DAY/ NIGHT SURVEILLANCE & TARGETING PAYLOAD



PORTFOLIO CATEGORY

MISSION SYSTEMS

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Current ISDELA solution presented for programme-specific integration and export configuration.

PUBLIC CAPABILITY HIGHLIGHTS

- High Definition Long Range Surveillance and Targeting
- HD Thermal Imager, HD Day Imager, HD SWIR, Eye-safe LRF
- 4-axes Gyro Stabilized
- 24 / 7 Mission Capability

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

03

C4ISR

C4ISR, Communications & Electronic Systems

Digital mission systems, tactical communications, surveillance, sensing, robotics, electronic support and specialised field systems.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

27 named products or source sheets

SECTION STRUCTURE

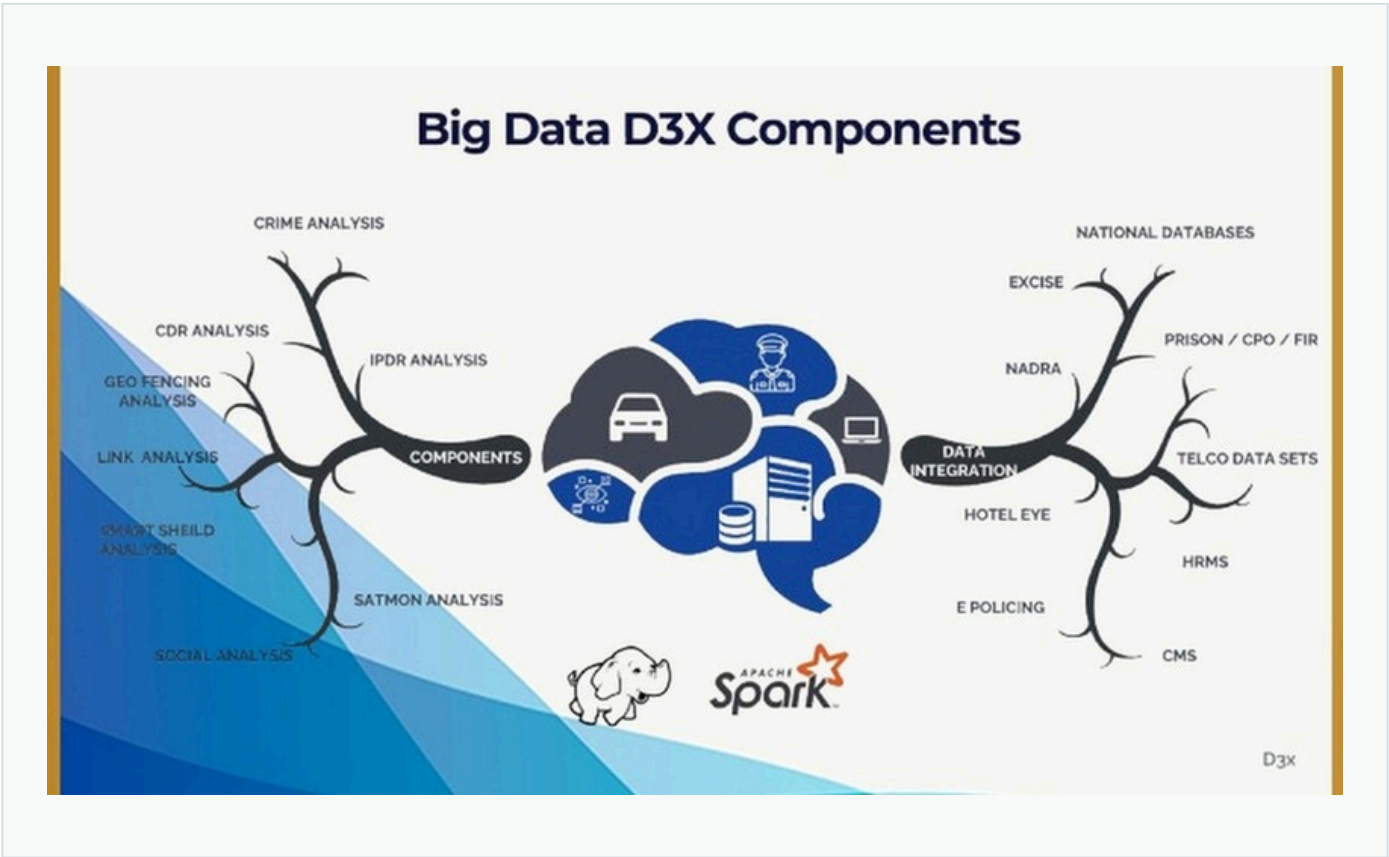
Digital systems / Sensing & surveillance / Communications / Robotics & specialist systems

C4ISR, Communications & Electronic Systems

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Big Data - D3X Engine



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

D3X Engine from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Big Data
- Configuration: D3X Engine
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Bomb Manipulator - Bomb Manipulator(BM-001)



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Bomb Manipulator(BM-001) from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Bomb Manipulator
- Configuration: Bomb Manipulator(BM-001)
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Digital Intercom - Digital Intercom System (DIS)



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Digital Intercom System (DIS) from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Digital Intercom
- Configuration: Digital Intercom System (DIS)
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Direction Finding - Direction Finding Sys



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Direction Finding Sys from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Direction Finding
- Configuration: Direction Finding Sys
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Direction Finding - Mobile Direction Finding Sys



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

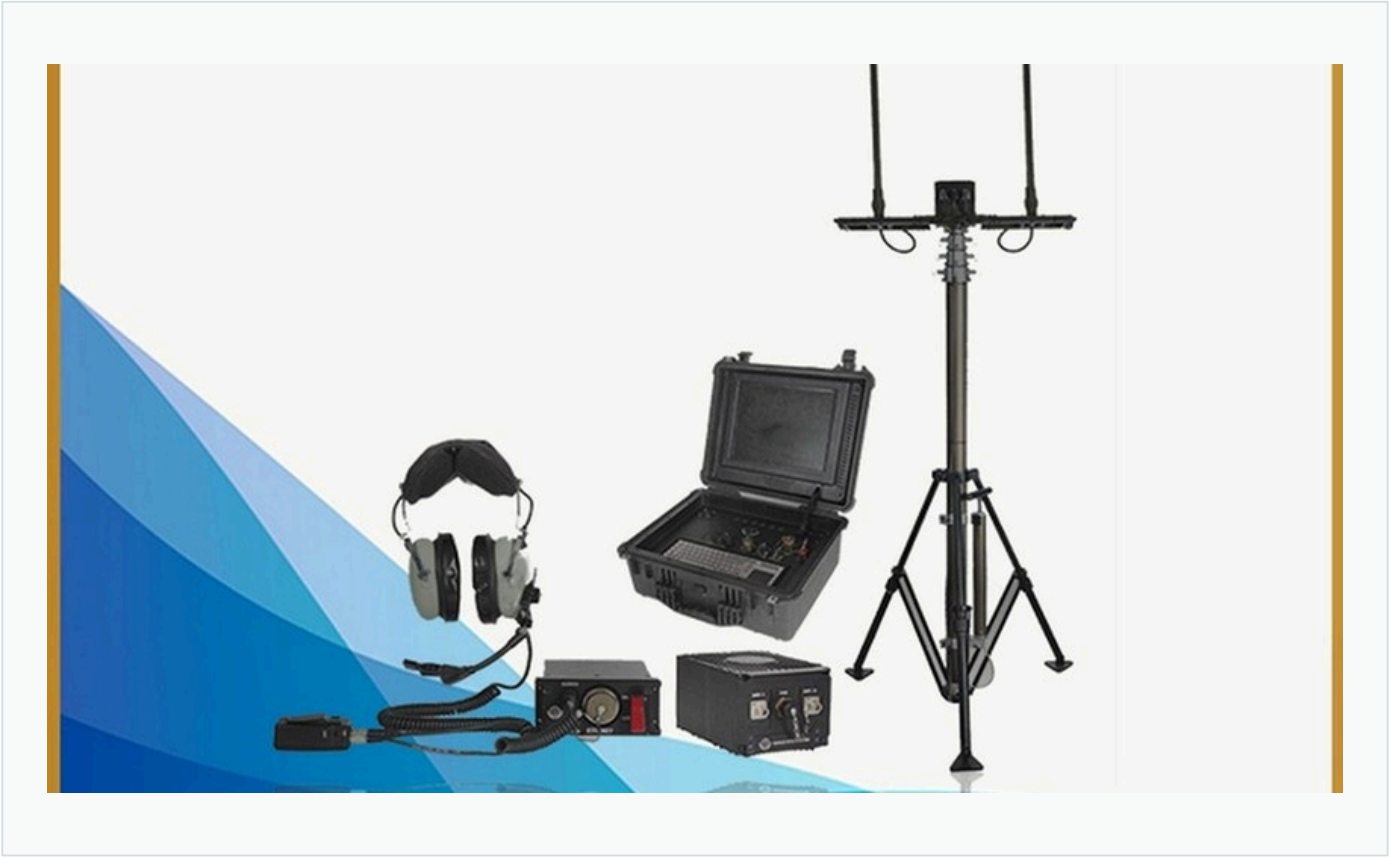
Mobile Direction Finding Sys from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Direction Finding
- Configuration: Mobile Direction Finding Sys
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Eagle Eye - Eagle Eye System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Eagle Eye System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Eagle Eye
- Configuration: Eagle Eye System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

EW System - EW Communication Jammer



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

EW Communication Jammer from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: EW System
- Configuration: EW Communication Jammer
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Field IP Comm - Digital IP Exchange



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Digital IP Exchange from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Field IP Comm
- Configuration: Digital IP Exchange
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Fire Guard - Fire Fighting Robot



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Fire Fighting Robot from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Fire Guard
- Configuration: Fire Fighting Robot
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Forensics - Digital Forensics



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

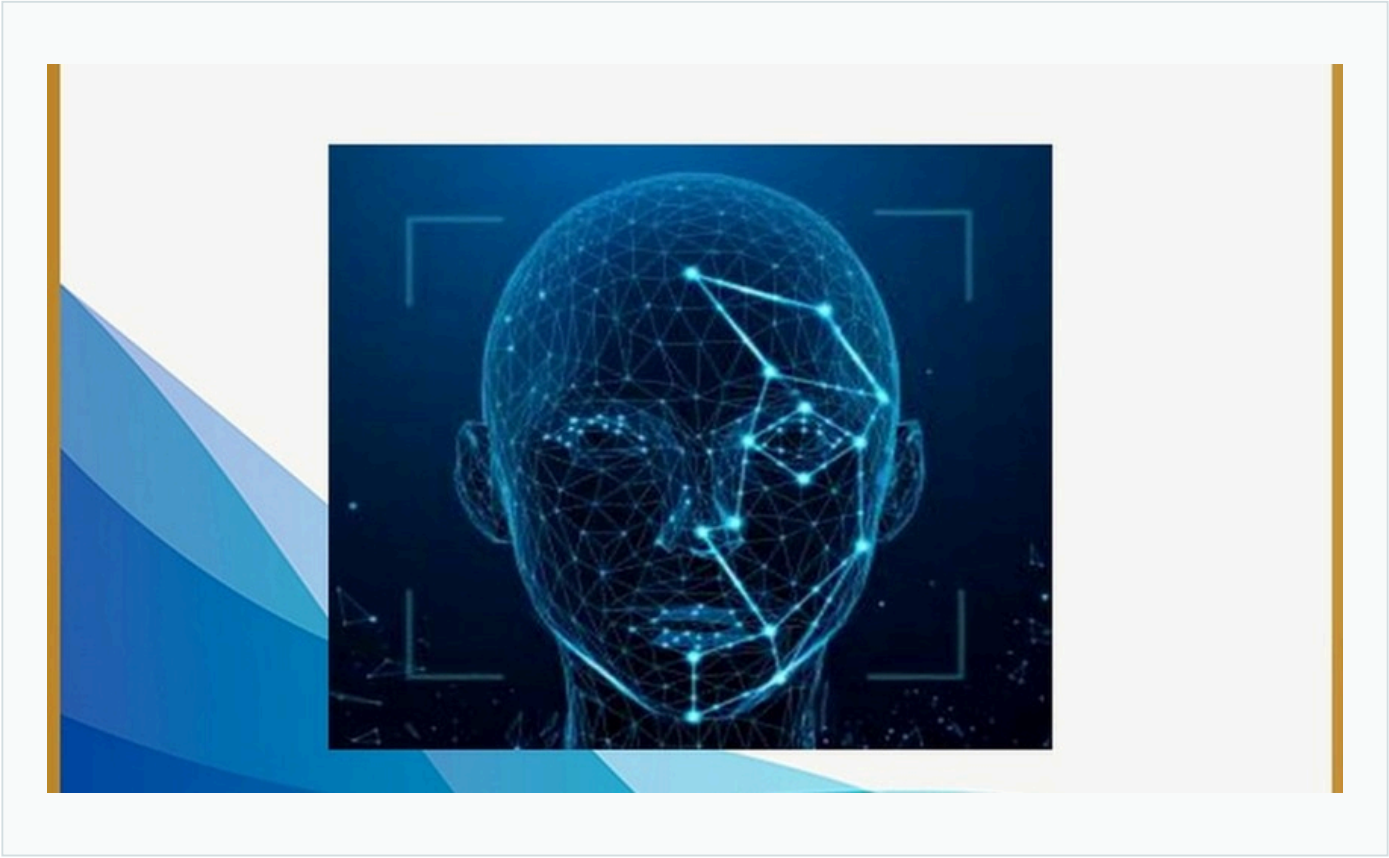
Digital Forensics from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Forensics
- Configuration: Digital Forensics
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

FR System - Facial Recog System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

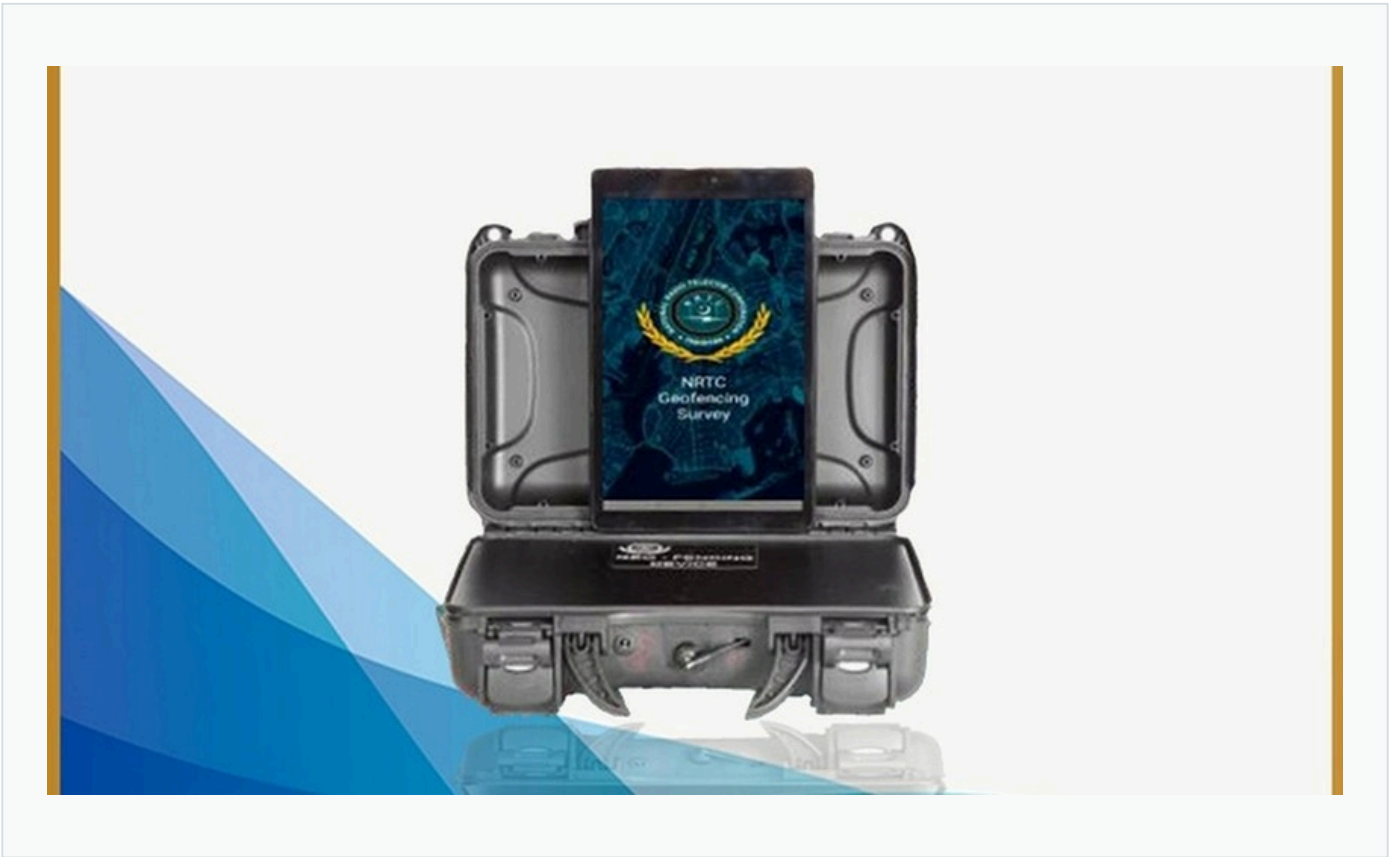
Facial Recog System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: FR System
- Configuration: Facial Recog System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Geofencing Sol - Geofencing Survey



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Geofencing Survey from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Geofencing Sol
- Configuration: Geofencing Survey
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Hadaf Robots - EOD & Robotics



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

EOD & Robotics from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Hadaf Robots
- Configuration: EOD & Robotics
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Jammers - Manpack Jammers



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Manpack Jammers from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Jammers
- Configuration: Manpack Jammers
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Jammers - RCIED Jammers



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

RCIED Jammers from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Jammers
- Configuration: RCIED Jammers
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Line of Sight - HCLOS System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

HCLOS System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Line of Sight
- Configuration: HCLOS System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Line of Sight - LCLOS System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

LCLOS System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Line of Sight
- Configuration: LCLOS System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

LMR - Land Mobile Radio System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Land Mobile Radio System from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: LMR
- Configuration: Land Mobile Radio System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Monitoring Equip - Monitoring System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Monitoring System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Monitoring Equip
- Configuration: Monitoring System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

NPR System - Number Plate Recog



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Number Plate Recog from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: NPR System
- Configuration: Number Plate Recog
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Pigstick IED - Pigstick IED Disrupter



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Pigstick IED Disrupter from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Pigstick IED
- Configuration: Pigstick IED Disrupter
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SDR - HF SDR



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

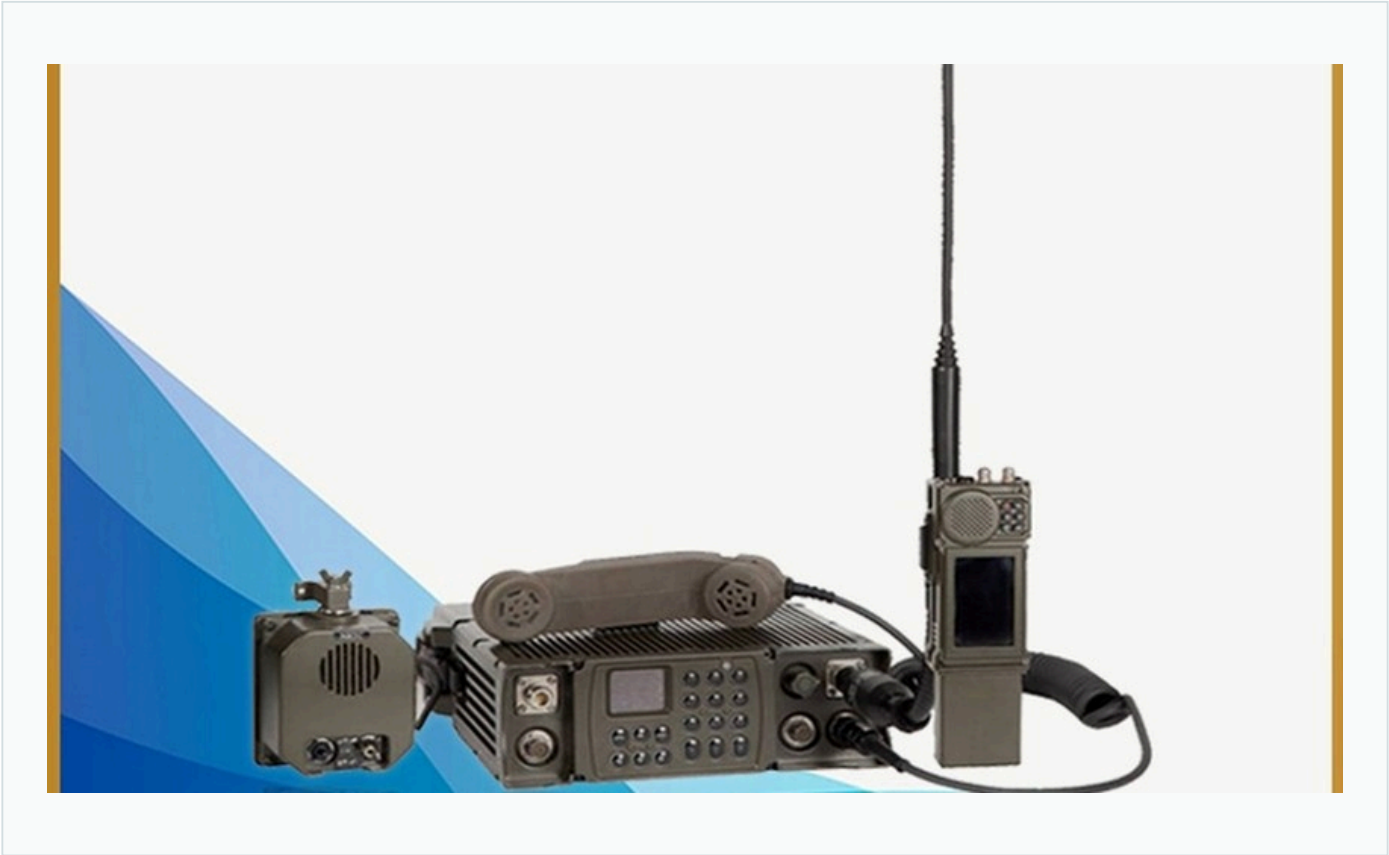
HF SDR from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: SDR
- Configuration: HF SDR
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

SDR - V/UHF SDR



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

V/UHF SDR from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: SDR
- Configuration: V/UHF SDR
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Sensor System - Unattended Ground Sensors System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Unattended Ground Sensors System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Sensor System
- Configuration: Unattended Ground Sensors System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Terminal Radios - ISDELA Terminal Radios



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

ISDELA Terminal Radios from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: Terminal Radios
- Configuration: ISDELA Terminal Radios
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

UAV - Anti Drone System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Anti Drone System from ISDELA's official defence-technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: UAV
- Configuration: Anti Drone System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

UVIS-I - Vehicle Inspection System



PORTFOLIO CATEGORY

C4ISR

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Vehicle Inspection System from ISDELA's official defence- technology portfolio.

PUBLIC CAPABILITY HIGHLIGHTS

- Product family: UVIS-I
- Configuration: Vehicle Inspection System
- Integration and controlled specifications supplied against an approved requirement

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

04

MARITIME

Naval Platforms & Shipbuilding

Shipbuilding, patrol and auxiliary craft, surface-combatant programmes, marine infrastructure, refit and through-life support.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

13 named products or source sheets

SECTION STRUCTURE

Patrol & utility craft / Surface combatants / Auxiliary vessels / Marine infrastructure

Naval Platforms & Shipbuilding

Index 1 of 1 / select any entry to open it

SECTION SCOPE

Shipbuilding, patrol and auxiliary craft, surface-combatant programmes, marine infrastructure, refit and through-life support.

ISDELA PORTFOLIO

13 INDEXED CAPABILITIES

CLICK ANY CARD TO OPEN

PATROL & UTILITY CRAFT

10 Ton Bollard Pull Tug

102

AUXILIARY VESSELS

Coastal Oil Tanker

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MARINE INFRASTRUCTURE

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MARINE INFRASTRUCTURE

Split Hopper Barges

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10 Ton Bollard Pull Tug



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Harbour tug project configured for ship-assistance and utility duties.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Coastal Oil Tanker



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Coastal tanker project for liquid logistics and support roles.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Dredge Tender



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Dredging-support tender for harbour and channel operations.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

F22P Frigate



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Frigate construction and support capability associated with the F-22P programme.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Fast Attack Craft (Missile) - FAC(M)



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

High-speed missile craft for littoral and maritime-security missions.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Floating Dock



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Floating repair and docking infrastructure for fleet and commercial support.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Harbour Utility Vessels



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Utility-vessel class for harbour support, personnel and stores movement.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Midget Submarines



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Compact submarine construction and sustainment capability.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Multi Purpose Auxiliary Craft - Missile (MPAC)



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Multi-purpose auxiliary craft configured for missile and patrol roles.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Multipurpose Barge



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Barge platform for cargo, workshop and mission-specific support configurations.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

PN MILGEM-class Corvettes



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

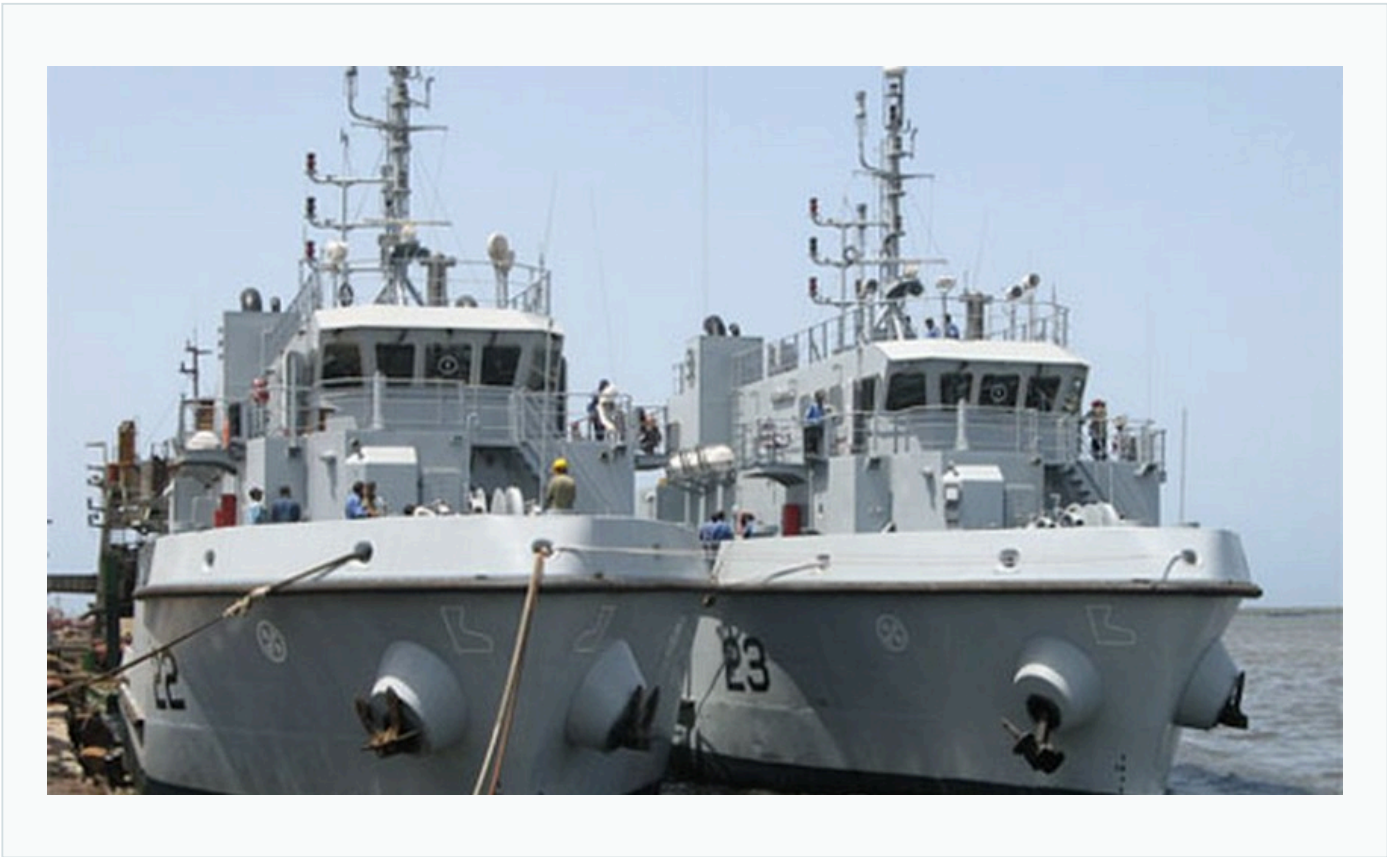
Modern corvette construction programme for Pakistan Navy.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Small Tanker cum Utility Ship (STUS)



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Combined tanker and utility-vessel project.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

Split Hopper Barges



PORTFOLIO CATEGORY

MARITIME

PORTFOLIO STATUS

Programme-specific configuration and availability subject to confirmation.

OVERVIEW

Self-propelled hopper-barge projects for dredging and marine works.

PUBLIC CAPABILITY HIGHLIGHTS

- Builder: ISDELA
- Mission fit and dimensions are programme-specific
- Construction, refit and through-life support subject to contract scope

ISDELA CONTROLLED PORTFOLIO / CONFIGURATION SUBJECT TO CONFIRMATION

05

LAND SYSTEMS

Land Systems, Armour & Protection

Armoured fighting vehicles, support vehicles, production infrastructure, protection products, engineering support and test capability.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

25 named products or source sheets

SECTION STRUCTURE

Industrial capability / Armoured platforms / Security & protection / Support & test infrastructure

Land Systems, Armour & Protection

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ARMoured PLATFORMS	129		
Sakb command vehicle			

Tank Manufacturing Factory

Tank Manufacturing Factory (TMF)

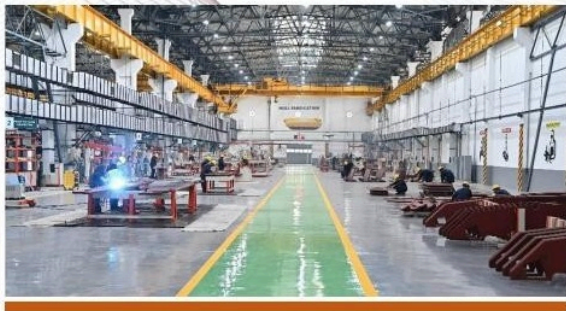
Established in 1992 for manufacturing of new Tanks. Manufactured Tanks T69IIMP, T85IAP, Al-Khalid, Al-Khalid 1, and Armoured Recovery Vehicles (ARVs). It is equipped with state of the art CNC / modern production machines. The facility has been reconfigured for manufacturing new Tank Haider (based on Tank VT4 technology)



Robotic Arm Welding Station



Robotic Arm Welding Station for Hull



Hull Fabrication Shop



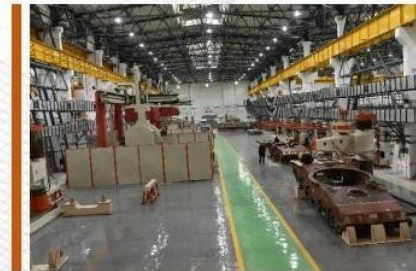
Hull Fabrication Shop



Stringent Quality Control



Course Turret Machining



Hull Fabrication Shop



Manufacturing to Perfection



Welding of Armoured Plates - Tank Hull

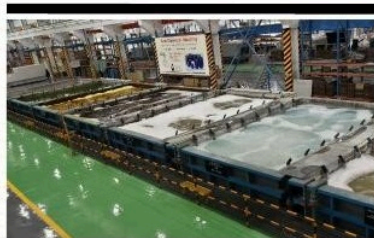


Precision Machining (7 Axis CNC)

APC Manufacturing Factory

APC Manufacturing Factory (APCF)

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



Surface Treatment Facility



Hull Welding Facility



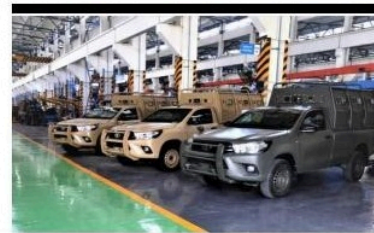
Gantry Milling Machine



Assembly Line



Production Line – Command Vehicle SAKB



B6 / IED Protection Solution



Production Line – ASV Protector



5 Axis CNC Water Jet Cutting Facility



Laser Precision Bending



Production Line – Discrete Armouring Toyota Hilux

Gun Manufacturing Factory

Gun Manufacturing Factory (GF)

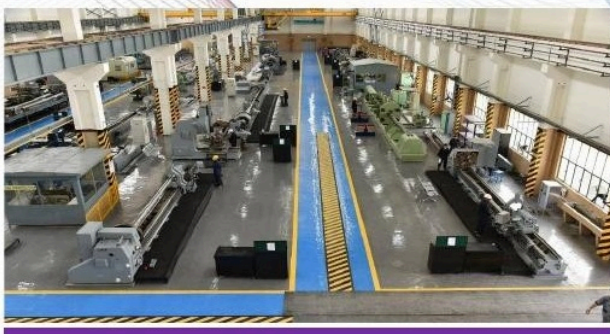
Established in 1992. OEM of rifled / smooth bore 105 & 125mm Tank barrels and gun parts. A unique and highly sophisticated facility equipped with state of the art tank barrel manufacturing, autofrettage and chrome plating facilities. Being configured for large scale manufacturing of Artillery gun barrels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



Industrial Material Handling Facilities



Cradle Machining



Barrel Manufacturing Shop



Chrome Plating Facility



Turning Operation



Barrel Straightening



Hydraulic Autofrettage



Inspection and Quality Control



Honing Operation



Mechanical Autofrettage

Heavy rebuild factories

Heavy Rebuild Factory T- Series (HRF-T)

Established in 1971 - The Mother Factory. Fully configured and capable of rebuild, upgrade and modernize tanks / ARVs of Chinese & East European origin. Rebuilt / upgraded Tanks T-59/69, Al-Zarrar, T85UG, T80UD, Al-Khalid and ARV W653.



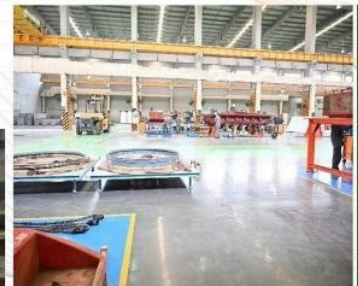
Assembly of Tank



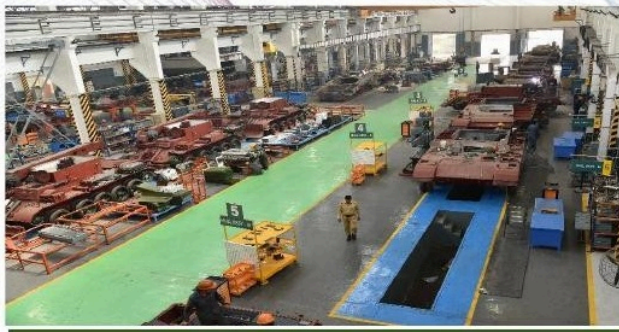
Industrial Welding



Assembly Shop - Tank Al Khalid



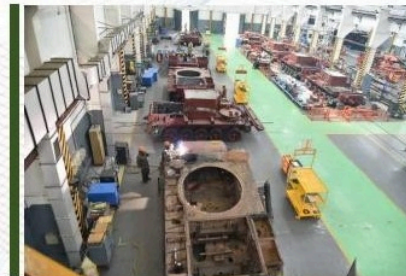
Assembly Shop - Tank T80UD



Assembly Shop - Tank T85UG & ARVs



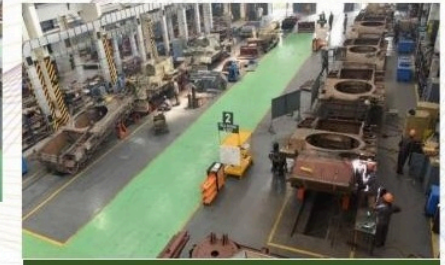
Assembly of Tank T85UG



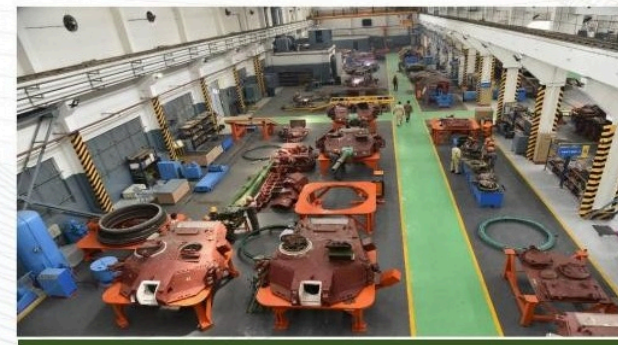
Hull Fabrication Shop



Hull Assembly Shop



Rebuild of Tank T85UG



Turret Assembly Shop - Tank T85UG / ARVs

Engineering Support support capability

Development, Engineering Support & Component Manufacturing

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



Specialized Machining Facility



Tanks/ APCs Parts Manufacturing



General Machining Facility



Gun Breech Block Machining



Tools Manufacturing Shop



CNC Milling Facilities



Bullet Proof Jacket Manufacturing



Fabrication— Engine Intake Valve



CNC Lathe Facilities



EDM Wire Cut Facility

Advanced Systems Rebuild Factory and R&D

Advance System Rebuild Factory (ASRF)

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



Tank Haider Simulation Lab



Fire Control System Lab



Manufacturing / Refurbishment of Electric Harnesses



Inspection and Testing Facilities



Tank Al Khalid Simulation Lab

Advance Research, Development & Information Centre (ARDIC)

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



Artillery Gun Systems Design and Simulation Lab



Rapid Prototyping Facility



PCB Design and Fabrication Lab



Electrical Systems Design and Simulation Lab



Tank Systems Design and Simulation Lab

Haider main battle tank

Tank Haider



Characteristics

General Specification

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

Running Gear

Track	Metal with removable rubber pad pivot turning available
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Mobility / Performance

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

Ammunition

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

Muzzle Reference System

Equipped with MRS AAMG Sighting System.	AAMG can be remotely controlled to acquire track a target, measure and set the range automatically.
---	---

Protection

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

Misc

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

Power Pack

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

Suspension System

Type	Torsion Bars, Shock Absorbers
Bump Stop	Hydraulic Buffer

Fire Power

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

Auto Loader

Automatic and digitized

FCS / GCS

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

Al-Khalid-I main battle tank

Tank Al-Khalid-I



Pride of Pakistan

Characteristics

General

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

Power Pack (Ukraine 6TD-II)

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

Running Gear

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

Suspension

Type	Shock Absorber & Torsion Bars
Bump Stop	Hydraulic Buffer

Performance

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

Armament

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

Ammunition

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

Auto Loader

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

FCS/GCS

Type	Image Stabilized
Optics	Laser Protected

FCC

Multi Process configuration
Electrical display screen
Key type Push Button

Commander Sight

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

Magnification

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

Head Mirror Stabilized Gunner Sight (HMSS)

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

LRF

Type	NDYAG
Range	200-10,000m

Auto Tracker

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

Protection

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

Misc

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

Additional Add Ons

- Integrated Battle field Management System

Specifications

Al-Zarrar main battle tank

Tank Al-Zarrar



Up Gradation

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

Characteristics

General:

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

Running gear Suspension

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

Armaments

Main Gun	125mm Smooth Bore
Projectiles	APFSDS, HEAT, HE
Co-axial MG	7.62 mm
AA MG	12.7 mm

Loading System	Semi auto Loading/ Ramming System
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ISFCS	Image Stabilized Fire Control System with Laser Range Finder (LRF) and Ballistic Computer
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Firing Capability	S-S, S-M, M-M, M-S
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Protection	Fire Extinguishing and Explosion Suppression System. Thermal Smoke Screen. Add-on Armour/Explosive Reactive Armour.
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Composition of Thetis System

THETIS system is composed of the following assemblies:

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

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

Field of View

Wide	8° x 6°
Narrow	3.2° x 2.4°

Range

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

Operation Modes of Thetis System

- IS Mode
- SFCS Mode
- Emergency Mode

Special Features

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

Technical Specifications

- Periscopic, High Performance
- Biocular, Large diameter, rubber padded, permits two eye viewing
- Magnification
- FOV
- Rotation
- Resolution
- Automatic Brightness Control
- Effective Range
- MRS Facility Available

Unity
38±2°
Left & Right each 35°
40LP/mm
Yes
250m
Standard

Specifications

M113P armoured personnel carrier

Armoured Personnel Carrier M113P (With 12.7 mm Protection)



Characteristics

Armour System

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

Protection of Vehicle

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

Multi-Hit Capability

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

Mounting System

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

Rotating Turret

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

Technical Specifications

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

Additional Modifications

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

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

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

Technical Specifications of Armour

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

Main Characteristic

General	Performance
Weight, combat loaded	11,860 kg
Weight, Curb	10,360 kg
Length	190 Inches
Width	122.06 Inches
Height without Turret	73 Inches
Height with Turret	97.5 Inches
	Speed (Level land)
	62 Km/hr
	Acceleration (0-32) Km/h
	9 Second
	Gradient
	60%
	Side Slope Negotiation
	30%
	Drift
	(3 feet in 100 feet while traveling between 20-30 mph)
	Braking Distance at Speed (32-0 km/h)
	26 feet

Talha armoured personnel carrier

Armoured Personnel Carrier Talha



Specifications

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

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

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

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

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

Characteristics

General

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

Engine

Make, model and type	Detroit Diesel 6 V53T, two stroke cycle
Rated horse power	265 HP
Gross horse power to combat weight ratio	22.94:1 HP/ton

Transmission

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

Performance

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

Armour

5083 Aluminum

Final drive

Type: Gear

Running gear

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

Electrical system

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

Fire extinguisher

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

Armament

7.62/12.7mm MG

Optional equipment

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

Qaswa logistics vehicle

Armoured Personnel Carrier Qaswa
(Logistic Vehicle)



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

Characteristics

General:

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

Performance:

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

Power Pack

Engine	265 HP
Transmission	Automatic
Pivot Break Type	Disc

Protection

Armour	Aluminum Alloy
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Specifications

Sakb command vehicle

Armoured Personnel Carrier SAKB (Command Vehicle)



Characteristics

General:

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

Performance

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

Engine

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

Transmission

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

Protection

Aluminum	5083 Series
Armour	Aluminum Alloy

Running Gear

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

Final Drive

Type	Gear
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Electric System

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

Fire Extinguisher

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

Special Features

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

Optional Features

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

Specifications

125 mm barrel and gun system

125 mm
Smooth Bore Tank Gun



Characteristics

Material

Weight of forging blank
Weight of finished blank
No of Operations

Breech Ring

PCrNi3MoVA
1400 kg
572.5kg
79

Breech Block

PCrNi3MoV
200 kg
63.17 kg
69

General

Caliber
Barrel Length
Weight of Gun
Elevation
Depression
Rate of Fire
Firing System

125mm
6000 mm
2500 kg
14°
6°
6 ~ 8 RPM with auto loader
Manual & Electrical

Major Items Produced At

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

Firing Range (Effective)
Chamber Pressure (Normal Charge)
Chamber Pressure (Super Charge)
Muzzle Velocity
Weight of Complete Shell
Service Life of Barrel

A/U

Meters
Mpa
Mpa
Meter/second
kg
500 Rounds at a ratio of 4 APFSDS: 3HE, FS: 3 HEAT, FS

Type of Ammunition

APFSDS HEAT, FS HE

2000
470.7
434.5 ± 4.9
1730
21
2000
294.2
333.4
905
29
2000
343.2
377.3 ± 3.92
850
33

Specifications

Dragoon armoured security vehicle

Armoured Security Vehicle Dragoon



Characteristics

General:

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

Performance:

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

Power Pack

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

Protection

Ballistic Protection	Stanag Level III (with Add On Armr)	Options • Stanag Level III • Level 3+ (Incl - 0.52 Cap Ap) • Stanag Level IV
Run Flat Tyres	As Per Finabel Standard	Level 4A / 4B As Per Finabel Standard

Standard Feature

Air Conditioning System	Provided	Provided
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Specifications

Protector armoured vehicle

Armoured Security Vehicle Protector (B7 Level Protection)



Maximum **Protection** with Minimum **Weight**

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

Characteristics

Engine Type
Transmission Type
Drive System
Ground Clearance
Brake System
Seating Capacity
Suspension
Tires

Water cooled Turbo-Diesel inter - cooled, 8 cylinder, 150 KW (200 HP), at 3400 rpm
Manual, 5-speed forward and 1-reverse
4-wheel drive (4x4)
200 mm
Hydraulic power assisted brakes (Upgraded)
8(2 + 6)
Heavy duty (Upgraded)
Run - flat tyres (4 + spare); shall meet the NATO / FINABEL speed and distance standard of 50Km at 50 km/h (Inserts will be from reputed firm).

Steering
Electrical System
Exhaust Fan
Power Assisted
12V DC, 100 AMP or better

Body Protection

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

Seating Arrangement

Type and arrangement of seating is not specific but shall be consistent with gun port accessibility and room for turret. All seats have seat belts.

Bullet Proof Glass

Windscreen, side glasses and view ports protected against B - 7 / NIJ - STD - 01 08 01 level IV duly covered by steel mesh provided with 80% clarity.

Firing Ports

Will provide an ergonomic and practical location based in the internal layout of the proposed vehicle.

Firing Hatches

2
Vertical rack(s) for a total of 5 full stock of AK-47 rifles.

Rifle Racks

2
Centered position, Manned turret with B-7 standard armour protection. The turret will have a demountable seat; minimum 14" height with hatch cover; 360 degree rotation and adaptable for LMG installation

Ammunition Boxes

Standard vehicle tools

Turret

Available (Optimum air conditioning will be assured)
Standard

Tools

2

Air Conditioner

1

Lifting and Towing Hooks

1

Fire Extinguishers

1

Public Address System

1

Revolving Light/Bar Light

As per user requirement

Color

1

Search Light

1

Siren System

1

Bumpers

Heavy duty front bumper, RAM style; heavy duty rear bumper with rear steps

Fuel tank Protection

Yes (Capacity 90 liter)

Running board and hand rail system to provide quick extraction of pedestrian personnel without entering the vehicle

Yes

Lights Protection

Head lights, rear brake lights, indicators and back lights protected with steel mesh

Power Source for Electronics,

220 Volts

1700 Watt Inverter

8

Tie Down Points

3 (2 front, 1 rear)

Doors

4900 Kg GVW

Weight of Vehicle

Generic brackets that can be adapted in country (Locally to fit the LMG for the proposed armoured personnel carrier).

Turret Mounting Brackets for Weapon

Optional

Camera Back view system

Winch

Jammer

Remote Control Gun with 360° rotation (12.7mm / 7.62 MG)

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

Specifications

Mohafiz-V armoured vehicle

Armoured Security Vehicle Mohafiz-V



Characteristics

General:

Length	5.4 M (W/O SPARE WHEEL)
Width	2.2 M
Height	2.1 M (Without Turret), 2.6 M (With Turret)
Curb Weight	4.8 Ton
Combat Weight	5.6 Ton
Crew Cap	8

Performance:

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

Power Pack

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

Protection

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

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

Features

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

Ballistic and IED-protected military vehicles

Ballastic/IED Protection - Military Vehicles



Characteristics

General:

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

Performance:

Gradeability	60% MIN
Side Slope	30%
Fording Depth	0.7M
Approach Angle	40°
Departure Angle	45°

Protection

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

Upgrades

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

Discreetly armoured commercial vehicles

Discreetly Armoured Commercial Vehicles (B6 Level Protection)



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

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

Main feature of bullet proofing are as under:

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

Specifications

Bullet-resistant jacket - NIJ Level III

Bullet Proof Jacket

NIJ Level III (+) / PK Level III



Characteristics

Design Features

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

Physical Properties

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

Hard Armour Plates

Protection Level	NIJ-III / Pk Std Level III (In conjunction with Level IIIA soft armor).
Shock absorbent	Edge protection provided
Weight per plate	Upto 1.7 Kg (Maximum)
Size / Shape	250 x 300 mm (minimum) single curvature
Outer cover	Laminated with suitable water proof fabric
Protection level	NIJ-III (6 x bullets of 7.62x51mm fired from 15m)
	Pk Std Level III (9 x bullets fired from 15m)
	• (3 x rounds of 7.62 x 51 mm – M80 Ball)
	• (3 x rounds of 7.62 x 39 mm – AK-47)
	• (3 x rounds of 5.56 x 45 mm – SS-109)

Soft Armour

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

Operational Life

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

Trauma pack

Material	Suitable thickness of closed cell foam
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Accessories

Carrying Bags

Specifications

Bullet-resistant jacket - NIJ Level IV

Bullet Proof Jacket (BPJ)
NIJ Level IV



Characteristics

Design Features

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

Physical Properties

Weave, Weight, Destiny, Shrinkage, Colour and Colour Fastness	As per International Standards
Ballistic Insert	Multi layered Ballistic material
Shell fabric weight	1.0 - 1.5 Kg (depending upon size)
Protection plate (HAP)	ICW (300x250x20)mm, 2.5 KG
Protection level	NIJ IV
Outer cover	
Chemically inert, water resistant, weave, colour fastened, shrink proof, floatable.	
Provide maximum protection against full metal jacket	
Blast trauma protection	
Minimize blast trauma injuries	
Excellent stopping power with multi angle shot benefit	
Nylon (Cordura 1000 D)	

Accessories

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

Specifications

Ballistic vests and helmets

Bullet Proof Vest Helmet (BPV) NIJ IIIA

Characteristics

Design

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

Physical Properties

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

Soft Armour

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

Shelf Life

Soft Armour	5 Years
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Operational Life

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

Trauma Pack

Material	Suitable thickness of closed cell foam
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Accessories

Carrying Bags	
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Specifications

Ballistic Helmet NIJ Type II

Characteristics

Ballistic Protection

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

Fragmentation Protection

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

Sizes

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

Colours

Standard colours are black, navy blue, olive drab.

Accessories

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



Specifications

Guard post and bunker protection

Armoured Guard Post Bunker
(B6 / B7 Level Protection)

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

Specifications

Characteristics

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

Special Features

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

Barriers, rostrums and protective screens

Modular Vehicle Barrier (2.5 Ton Truck Capacity)



Characteristics

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

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

Portable Tyre Killer



Compact Dimensions

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

Stretch Dimensions

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

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

Bullet Proof Rostrum and Screens B6 / B7 Level Protection

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

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

Standard Characteristics

Height without glass	4ft
Height with glass	6ft
Ballistic protection	B6 / B7 Level Protection
Protection against hand grenade	Full
Field of view	All around through Large size bullet proof glass
Type	Modular
Color scheme	As per user requirement

Additional Features

Rack for placing documents
Glass Holder
Spot light

Customized Options

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



Testing facilities

Testing Facilities

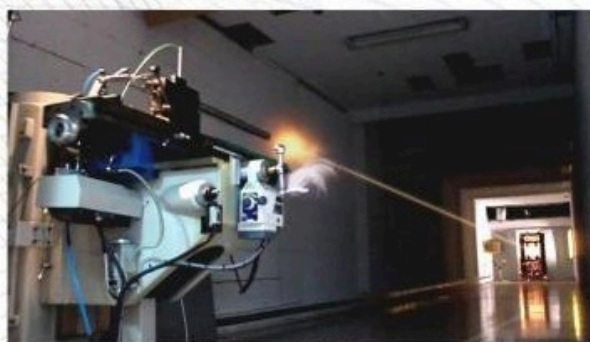
ISDELA maintains specialised testing facilities aligned with international requirements. These capabilities support R&D, material analysis, prototype qualification and final-product testing and authentication.



Test Track for AFVs



Gun Proofing Facility



Ballistic Effect Testing Laboratory (BETL)



Non - Destructive Material Testing Lab



Chemical, POL & Rubber Testing Labs

06

WEAPONS & MUNITIONS

Weapons, Ammunition & Energetics

Infantry weapons, small- and medium-calibre ammunition, mortar and anti-tank munitions, explosives, propellants and industrial chemicals.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

67 named products or source sheets

SECTION STRUCTURE

Infantry weapons / Small-arms ammunition / Aircraft & anti-aircraft ammunition / Mortar ammunition / Tank & anti-tank ammunition / Grenades, fuzes & pyrotechnics / Explosives & propellants / Commercial products & chemicals

Weapons, Ammunition & Energetics

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Weapons, Ammunition & Energetics

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Infantry weapons

Sub Machine Gun

SMG-PK & PK1 (Produced in Auto and Semi Auto irreversible versions)



SMG PK is one of the most reliable and compact sub machine gun in production at the ISDELA. Based on the famous H&K delayed roller locked blowback system, this 9 mm sub machine gun can be employed for Close Quarter Battle (CQB) and is popular among military personnel, signal personnel, para jumpers, SSG, officers on special duty, military police and civil law enforcing agencies. SMG-PK presents complete versatility and mobility coupled with the punching power of 9 mm Para ammunition. It is also available in semi automatic irreversible version. These SMGs come with universal carrying sling, spare magazine and cleaning kit.

Technical Data

Caliber	9 x 19 mm Para
Feed Device	15 Rounds Magazine
Type of Fire	Single and Automatic
Rate of Fire	900 RPM
Muzzle Velocity	375 m/s
Sights	Rigid Front Sight & Rotary Rear Sight
Length of Weapon	340 mm
Length of Barrel	115 mm
Weight of Weapon	2.0 kg

SMG PK is available with end cap and standard pistol grip.
SMG PK-1 is available with retractable butt stock and standard pistol grip.

Packing

Each SMG-PK and PK1 in a polythene bag, 05 SMGs in cardboard cartons, 02 cartons (10 SMGs) in a wooden box.

Size of box	64 x 61 x 46 cm
Gross weight	48 kg
Colour & marking	Service brown with yellow / white stencilling

MP5 A2 & MP5P3

Sub Machine Gun

MP5 A2 & MP5P3 (Produced in Auto and Semi Auto irreversible versions)



The sub machine gun MP5 is roller delayed blow back system. This is a magazine fed automatic weapon, which can be shoulder-fired or from the hip. Ideal in use for close combat and para military purposes. It i also available in Semi Auto irreversible version.

Technical Data

Caliber	9 x 19 mm Para
Feed Device	30 round Magazine
Type of Fire	Semi automatic and sustained
Rate of Fire	800 RPM
Muzzle velocity (Vo)	400 m/s
Effective Range	100 m
Sights	25m and 100m dioptré – rotary rear sight adjustable for windage and elevation
Rifling	6 grooves with constant right hand twist

Length of Weapon

MP5A2	680 mm (Fixed butt stock)
MP5P3	490 mm (Butt Retracted) 660 mm (Butt Extended)
Length of Barrel	225 mm
Width of Weapon	50 mm
Height of Weapon	210 mm
Weight of Weapon with fixed butt stock and without magazine	2.54 kg
Weight of empty 30 rounds magazine	0.17 kg
Weight of Ammo	0.012 kg

Packing

Each SMG in a polythene bag, 05 SMGs in cardboard carton, two cartons (10 SMGs) in a wooden box:

Size of box	88 x 56 x 45 cm
Weight of box	67 Kg
Colour and marking	Service brown with yellow/ white stencilling

G3A3 & G3P4

Assault Rifle

G3A3 & G3P4 (Produced in Auto and Semi Auto irreversible versions)



Automatic Rifle G3A3, cal 7.62mm x 51 NATO is a modern rifle combining the accuracy of a sniper rifle with the fire power of a machine gun. It is produced in accordance with the most advanced manufacturing methods. The rifle is designed for semi-automatic and fully automatic fire and can be fired from any shooting position. It is also available in semi-automatic irreversible version. Rifle G3A3 has free floating barrel and delayed roller locked bolt system and is fed from a 20 round magazine. Each rifle is provided with means to mount a telescope.

Technical Data

Caliber	7.62 x 51 mm NATO
Magazine	20 round, box magazine
Type of Fire	Semi and fully automatic
Rate of Fire	500-600 RPM
Muzzle velocity	780-800 m/s
Muzzle Energy	3000 NM

Sights

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

Length of standard weapon

G3A3	1025 mm
G3P4	840 mm (Butt Retracted) 1,020 mm (Butt Extended)

Barrel length	450 mm
Width of Weapon	45 mm
Height of weapon	210 mm

Weight of Weapon without magazine

G3A3	4.4 kg
G3P4	4.7 kg
Barrel grooves	4 grooves, Right hand twist, 305 ± 10 mm lead
Effective Range	400 m

Packing

Each rifle in a polythene bag, 05 rifles in cardboard carton, two cartons (10 rifles) in a wooden box:

Size of box	120 x 56 x 60 cm
Weight of box	96 Kg
Colour and marking	Service brown with yellow /white stencilling

G3S

Compact Assault Rifle
SMG PK 7.62 x 51mm (G3S)



SMG PK 7.62 x 51 mm is compact assault rifle and uses the same caliber ammo as the main battle rifle G3A3. It is ideal for the law enforcement set ups, crew of heavy weapons, security guards, drivers and for mounted/dismounted operations. Optical/Night sights can be attached on the picatinny rail fixed on the receiver. It is available with fixed and side folding butt stock.

Technical Data

Caliber	7.62 x 51 mm NATO
Operation	Roller Locked Delayed Blow Back
Magazine	20 rounds
Weight of Weapon (with side folding butt stock)	4.15 K
Weight of Weapon (with fixed Butt Stock)	4.17 Kg
Length of Weapon	872 mm
Length of Barrel	300 mm
Sight Radius	475 mm
Muzzle Velocity	710 m/s
Effective Range	300 Meter with open sight 400 with optical sight

Packing

Each rifle in a polythene bag, 05 rifles in cardboard carton, two cartons (10 rifles) in a wooden box:

Size of box	120 x 56 x 60 cm
Weight of box	96 Kg
Colour and marking	Service brown with yellow /white stencilling

AZB (DMR) MK1

Assault Cum Sniper Rifle
AZB (DMR) MK1



With the changing nature of low intensity operation a strong need exists for a light weight, accurate and semi-automatic hybrid sniper cum service rifle. Accordingly, a Designated Marksman's Rifle (DMR) concept emerged. The [redacted] DMR MK-1 meets the laid down conceptual requirements. It is manufactured from standard G3 parts and requires little deviation for manufacturing, maintenance and training. It can quickly and effectively engage fleeting multiple targets at range upto 600 m.

Technical Data

Caliber	7.62 x 51 mm(NATO)
Operation	Roller Locked Delayed Blow Back
Magazine	5/20 rounds Capacity
Length of Weapon	1055 mm
Length of Barrel	508 mm (4 Groove Rt. Hand Std.)
Weight (Empty Magazine)	4.94 Kg
Effective Range	600 Meter
Accuracy	2 MOA at 100 Meter
Butt Stock	Plastic Fixed Butt Stock

Special Features

All parts are compatible and interchangeable with [redacted] made G3A3 Rifle.

Packing

Each rifle in a polythene bag,
04 rifles in a wooden box:

Size of box	130 x 42 x 34 cm
Weight of box	40 Kg (Approx)
Colour and marking	Service brown with yellow /white stencilling

MG3

Machine Gun

MG3



MG3 is fully automatic area weapon for sustained and bursts firing. It is a "recoil operated weapon, in which the recoil forces are used to feed and load the cartridges and to extract and eject the spent cartridge cases.

A blank firing attachment which is screwed onto the muzzle instead of recoil booster permits the use of blank cartridges for training and exercise purposes.

Technical Data

Caliber	7.62 mm x 51 NATO
Feed device	Disintegrating and non disintegrating belts (DM-1, DM-6 and M-13 links)
Type of Fire	Fully Automatic
Operating Principle	Recoil operated
Rate of Fire	Approx 1150 ±150 RPM
Sighting Device	Open sighting, using front and rear sights from 200 to 1200 m
Safety range in direction of firing	5000 m
Safety range left & right	1000 m each
No. of rifles/twist	Polygon 4 grooves with right hand twist
Muzzle velocity (Vo)	820 m/s
Muzzle Energy (Eo)	3200 NM
Length of standard weapon	1225 mm
Width of gun	130 mm
Height of gun with 'AA' sight raised	270 mm
Height of gun with 'AA' sight lowered	205 mm
Length of barrel with locking piece	565 mm
Height of muzzle with bipod unfolded	300 mm
Weight of weapon with bipod & sling	11.5 kg
Weight of weapon without bipod & sling	10.5 kg
Weight of barrel	1.7kg
Effective Range	800 m (on bipod) 2200 m (on tripod)

Packing

Each gun in a polythene bag, two machine guns in wooden box/steel Chest

Size of box (Wooden) 126 x 36 x 29 cm

Weight 52 Kg (Approx)

Size of box (Steel) 135 x 33 x 29 cm

Weight 65 Kg (Approx)

Colour and marking Service brown with yellow / white stencilling

PK-9

Sporting & Personal Protection

PISTOL PK-9

CALIBER 9X19 mm (PARA)



The pistol PK-9 is semi automatic and has a short recoil system of operation using a falling lock block. On firing the pressure by the combustion gases recoil the slide barrel assembly. After a short run the locking block will stop the backward movement of the barrel and release the slide, allowing it to recoil. The slide will then automatically move forwards feeding the next cartridge from the magazine into the chamber.

Technical Data

Caliber	9X19 mm
Brand	
Model	PK-9
Action	Double action
Firing System	Semi auto
Magazine capacity	13
Barrel rifling	6 groove RH
Muzzle velocity	400 m/sec
Sighting:	For blade integral with slide rear notched bar dovetailed to slide

Dimension

Barrel length	124 mm
Overall length	225 mm
Weight with empty magazine	980 gm

Sarsilmaz B-6

Sporting & Personal Protection

Pistol (B-6)

CALIBER 9X19 mm (PARA)



Technical Data

Caliber	9x19 mm
Brand	Sarsilmaz
Model	B-6
Action	Double action
Firing System	Semi automatic
Magazine capacity	15 + 1 / 17 + 1
Barrel material	Alloyed forged steel
Barrel rifling	6 groove RH
Muzzle velocity	400 m/Sec
Safety	Manual safety, firing pin block, hammer block
Sighting:	
Front sight	Changeable
Rear sight	Dovetail

Dimension

Barrel length	116 mm
Overall length	207 mm
Overall Height	140 mm
Overall width	28 mm
Weight with empty magazine	800 gm

Sarsilmaz ST-9

Sporting & Personal Protection
Pistol (ST-9)
Caliber 9 x 19 mm (Para)



Technical Data

Caliber	9 x 19 mm
Brand	Sarsilmaz
Model	SMZ-ST9
Action	Single action
Firing System	Semi automatic
Magazine capacity	15 + 1
Magazine material	Polymer
Barrel material	Alloyed forged steel
Barrel rifling	6 groove RH
Safety	Safety lever, firing pin safety
Sighting:	White dots

Dimension

Barrel length	116 mm
Overall length	198 mm
Overall Height	148 mm
Overall width	32 mm
Weight with empty magazine	820 gm

Model 4

Sporting & Personal Protection

POF-4

Semi-Automatic Irreversible



POF-4 Pistol is one of the most reliable & compact pistol in production at the ISDELA. POF-4 Pistol presents complete versatility and mobility coupled with the punching power of 9 mm Para ammunition. These POF-4 Pistol come with universal carrying sling, spare magazines and cleaning kit.

Technical Data

Type of Fire	Semi Auto
Caliber	9 x 19 mm Para
Muzzle Velocity	375 m/sec
Feed Device	15 x Rounds Steel Magazine
Sights	Rigid Front Sight & Rotary Rear Sight
Length of Barrel	115 mm
Length of Weapon	340 mm
Weight of Weapon with end cap, without magazine	2.0 Kg (Approx)

Packing

Each POF-4 Pistol is packed in a polythene bag, 05 Pistols in cardboard cartons, 02 cartons (10 Pistols) in a wooden box.

Size of box	64 x 61 x 46 cm
Gross weight	52 Kg (Approx)
Colour & marking	Service brown with yellow / white stencilling

Model 5

Sporting & Personal Protection

Semi-Automatic Irreversible



9 x 19 mm semi auto irreversible pistol is most reliable and robust weapon in our production line. The weapon is equipped with 15/30 rounds steel magazine & most suitable for close combat details. Other technical details parameters of weapon are given below.

Technical Data

Type of Fire	Single-Semi Auto
Caliber	9 x 19 mm Para
Muzzle Velocity (Vo)	(Approx) 400 m/sec
Muzzle Energy (Eo)	470 ft lbs (650 J)
3 x Lug Barrel with 6 x grooves constant right hand twist	
Steel Magazine	15 Rounds
Length of Barrel	8.85 inch (225 mm)
Length of weapon with end cap	460 mm
Line of Sight	13.39 inch (340 mm)
Weights of Weapon with end cap, without magazine	2.45 Kg (Approx)

Packing

Each Pistol is packed in a polythene bag, 05 Pistols in cardboard cartons, 02 cartons (10 Pistols) in a wooden box.

Size of box	64 x 61 x 46 cm
Gross weight	52 Kg (Approx)
Colour & marking	Service brown with yellow / white stencilling

.308 Win sporting rifle

Sporter Hunting Rifle
.308 Win Sporter



The ‘Sporter’ cal .308 Winchester has been designed as a hunting rifle with the firing mechanism of G3A3 in semiautomatic mode. The accuracy of the gun has been enhanced with a freely floating extended barrel and a mil standard pictanny rail for mounting telescope.

Technical Data

Type of Fire	Semi Automatic
Caliber	7.62 mm x 51 NATO/.308 WIN
Muzzle velocity	770-790 m/s
Effective Range	600 m
Barrel grooves	4 grooves right hand twist 305 ± 10 mm lead
Sights:	
Rear	Rotary rear sight with 4 adjustments 100 m "V" sight and 200, 300 & 400 m aperture sights, adjustable for windage and elevation.
Front	Fixed hooded post front sight
Magazine	5 x round, box magazine
Barrel length	521 mm
Length of weapon	1096 mm
Weight of weapon without magazine	4.66 Kg (Approx)

12.7 mm Type W-54

Anti Aircraft Machine Gun 12.7 mm TYPE W- 54



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

Technical Data

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

Traverse

Vertical traverse	-26 to 78 deg
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Horizontal Traverse

Air targets	360 deg
Ground Targets	120 deg

Performance

Effective Range

In air	1600 m
On ground	1500 m

Armour Penetration

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

Packing

2 Gun bodies with 2 AA sights, spare parts and accessories packed in a wooden box:

Size of box	126 x 43 x 47 cm
Weight of box	131 Kg
Colour and marking	Army Green with yellow / white stenciling

1 Gun mount with 10 ammunition boxes each containing link belt for 70 cartridges packed in a wooden box:

Size of box	177 x 55 x 65 cm
Weight of box	155 Kg
Colour and marking	Army Green with Yellow/white stenciling

2 Gun mounts packed in a wooden box:

Size of box	177 x 55 x 65 cm
Weight of box	164 Kg
Colour and marking	Army Green with Yellow/white stenciling

Small-arms ammunition

Small Arms Ammunition
9 X 19 mm Ball (1Z & 2Z)



This ammo is available in two variants.

a. 9x19 mm Ball P1 MK1Z Used for Pistol

b. 9x19 mm Ball MK2Z Used for 9 mm SMGs

Technical Data

	9mm Ball P1 MK1Z	9mm Ball MK2Z
Length of complete round	28.90~29.69 mm	28.90~29.69 mm
Weight of complete round	12.06~12.84 gm	12.06~12.84 gm
Propellant	Single base P2PHY	Single base P2PHR
Bullet Jacket	Gilding metal (GM)	Gilding metal (GM)
Cartridge Case	Brass 70/30	Brass 70/30

Performance

	9mm Ball P1 MK1Z	9mm Ball MK2Z
Muzzle Velocity	341 m/sec at 18.28 meters	395 m/sec at 10.00 meters
Mean chamber pressure	1763.8 Kg / cm ²	3059.1 Kg / cm ² (Radial)
Maximum range	100 m	150 m
Accuracy:	Rectangle of ≤ 254 x 152.4 mm at 25 m	MFOM 76.2 mm at 50 m

Packing

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

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

The packages are supplied with the standard marking.

7.62 × 25 mm ammunition

Small Arms Ammunition 7.62 x 25 mm (30 BORE)



Cartridge 7.62 x 25 mm is used for .30 Bore Pistols.

Technical Daata

Length	34.25 ~ 34.85 mm
Weight	10.20 ~ 10.30 gm
Propellant	Single base P2 PHR
Bullet Jacket	Gilding Metal (GM)
Case	Brass

Packing

50 rounds packed in a carton with plastic tray. 64 cartons (3200 rounds) packed in a polythene bag with an outer packing of steel /plastic box.

Net weight	32.8 Kg
Gross weight	38 Kg.
Size of box:	
Plastic	42.5 x 16.5 x 29.5 cm.
Steel	42.3 x 16.4 x 29.1 cm.

The packages are supplied with the standard marking.

7.62 × 39 mm ball cartridge

Small Arms Ammunition
7.62 x 39 mm Ball



Cartridge 7.62 x 39 mm is used in any standard 7.62 x 39 mm caliber weapon, in single shot or burst in diverse field conditions.

Technical Data

Length of complete round	55 ~ 56 mm
Weight of complete round	16.15 ~17 gm (Approx) (GMCS) 18.06 gm (Approx) (Brass)
Propellant	Single base pyroxyly powder (PAX)
Bullet Jacket	Gilding metal (GM)/Gilding Metal Clad Steel(GMCS)
Cartridge Case	Gilding Metal Clad Steel (GMCS) / Brass

Performance

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

Packing

20 rounds are packed in a carton and 84 cartons (1680 rounds) are further packed in polythene bag. Mouth of the bad is to be sealed. This polythene bag is further packed in steel box.

Net weight	30.35 Kg
Gross weight	36.18 Kg (Approx)
Size of box	42.5 x 16.5 x 29.5 cm.

The packages are supplied with the standard marking.

7.62 × 39 mm blank cartridge

Small Arms Ammunition
7.62 x 39 mm Blank



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

Technical Data

Length	48.20 – 0.62 mm
Weight	H-9.20 grams, L-8.80 grams
Propellant	Single base smokeless
Cartridge Case	Brass

Packing

20 rounds packing in a carton 84 cartons (1680 rounds) packed in a polythene bag and this polythene bag is further packed in H-14/P steel box.

Net weight	16 Kg
Gross weight	23 Kg
Size of box	42.3 x 16.4 x 29.1 cm.

The packages are supplied with the standard marking.

7.62 × 51 mm ball and tracer

Small Arms Ammunition

7.62 x 51 mm Ball & Tracer



This ammo is available in two variants:

- a. 7.62x51 mm Ball
- b. 7.62x51mm Tracer

Cartridge 7.62x51 mm is used in any NATO Standard 7.62 mm caliber weapons, in single shot or burst in diverse field conditions

Performance

	7.62mm Ball	7.62mm Tracer
Muzzle Velocity(at 27,43 m)	811m/s	794m/s
Mean chamber Pressure	3196.8 Kg / cm ²	3196.8 Kg / cm ²
Maximum range	1000 m	1000 m
Accuracy:	Mean Radii 203 mm at 457m	Mean Radii 305mm at 457 m

Technical Data

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

Packing

7.62mm Ball	20 rounds packing in a carton
For Rifle G-3	50 cartons (1000 rounds) packed in Polythene bag. Outer packing steel box
Net weight	24 Kg
Gross weight	32 Kg
Size of box	42.5x16.5x29.5 cm 7.62mm Belted 250 rounds linked in a belt DM-1 & DM-6
For MG-3	One belt packed in Plastic/steel box. 4 boxes (1000 rounds) packed in a wooden/steel crate.
Net weight	24 Kg
Gross weight	36 ~ 41 Kg
Size of Steel box	40.95 x 34.8 x 29.5 cm.
Size of Plastic box	43.2 x 37.85 x 31.25 cm
Gross weight (Plastic box)	36 Kg

The packages are supplied with the standard marking

7.62 × 51 mm blank cartridge

Small Arms Ammunition

7.62 x 51 mm Blank (STAR)



Cartridge 7.62 x 51 mm Blank for use in any NATO Standard 7.62 mm caliber weapon, in single shot or burst in diverse field conditions.

Technical Data

Length	67.7 ~ 68.7 mm
Weight	13 gm (approx)
Propellant	Single base P3
Cartridge Case	Brass

Packing

20 rounds packing in a carton 50 cartons (1000 rounds) packed in steel box.

Net weight	14 Kg
Gross weight	21 Kg
Size of box	42.5 x 16.5 x 29.5 cm

The packages are supplied with the standard marking.

7.62 × 51 mm rifle-grenade cartridge

Small Arms Ammunition

7.62 x 51 mm Rifle Grenade



Use in Rifle G-3 with Grenade Hand ARGES P1 MK-1

Performance

Muzzle velocity 50 m/s with sleeve at 7.50 m, Sleeve weight 767.5 ~ 768.5 gram

Technical Data

Length	51.562 mm (Max)
Weight	14.6 gm (Max)
Propellant	Double Base Smokeless Powder Ballistile-3.5
Cartridge Case	Brass

Packing

20 rounds packing in a carton 50 cartons (1000 rounds) packed in steel box.

Net weight	13.25 Kg
Gross weight	20 Kg
Size of box	42.5 x 16.5 x 29.5 cm.

The packages are supplied with the standard marking.

7.62 × 54 mm ball and tracer

Small Arms Ammunition
7.62 x 54 mm BALL & Tracer



This ammo is available in two variants:

- a. 7.62 x 54 mm Ball
- b. 7.62 x 54 mm Tracer

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

Technical Data

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

Performance

	7.62 mm Ball	7.62 mm Tracer
Muzzle Velocity (at 27.43 meters)	823 m/s	808 m/s
Mean Chamber Pressure	3196.8 Kg / cm²	3196.8 Kg / cm²
Maximum range	1200 m	1200 m
Accuracy:	Mean Radii 254 mm at 457 m	Mean Radii 381 mm at 457 m

Packing

250 rounds linked in one belt. One belt packed in a Tin Liner. 2 Tin liners (500 rounds) packed in wooden box.

Net weight	13.5 Kg
Gross weight	22 Kg
Size of box	42.5 x 26.0 x 23.5 cm

Aircraft and anti-aircraft ammunition

Aircraft & Anti-Aircraft Ammunition

12.7 x 108 mm



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

- a. API (Armour Piercing Incendiary)
- b. API/T (Armour Piercing Incendiary, Tracer)

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

Technical Data

Weight

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

Performance

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

Chamber Pressure:

Mean	3000 kg/cm ²
Max	3300 kg/cm ²

Penetration:

API	20 mm steel plate placed at 100m (Minimum 90% bullets penetrate through the plate)
API/T	15 mm steel plate placed at 100m (Minimum 90% bullets penetrate through the plate)

Packing (Without Links)

280 rounds packed in a H14P MK1 steel box:	
Size of box	40 x 16.5 x 30 cm
Weight of box	42 Kg
Colour & marking	Service brown with yellow/white stenciling

20 × 102 mm armour-piercing ammunition

Anti Missile Ammunition
20 x 102 mm Phalanx Ammunition
(For Vulcan Phalanx Gun)



This ammunition is used in an American manufactured 6 barrelled Gatlin type Gun which is contained in its automatic controlling structure. The gun has a very high rate of fire and high muzzle velocity and is designed as an anti-missile weapon. The bullet is Armour Piercing and contains no explosive.

Performance

The ammunition is fed into gun in link belts.

Rate of firing	3000 Rounds/Minute
Muzzle Velocity	1135 + 15 m/s
Pressure	4075 kg/cm² Max
Range	1000 m

Technical Data

Weight of complete round	258.5 ±4 gm
Length of complete round	167.5 + 0.7 mm -0.5 mm
Penetrator Material	Tungsten alloy W95NE-H
Colour	Red
Weight	93.5 + 2 gm
Length	74 - 0.2 mm + 0.5 mm

Cartridge Case

Material	Brass 70/30
Weight	120.45 ± 3.3 gm
Length	101.9 - 0.38 mm
Propelling Charge	Single base propellant
Charge weight	40 gm
Primer	Electric M52A3B1

Packing (Without Links)

36 rounds in a steel box (M2A1) Measuring 31 x 16 x 19.5 cm,
03 steel boxes (108 rounds) packed in a wooden crate (P-213):

Size of wooden crate	55 x 37.5 x 26 cm
Weight of box	49 Kg
Colour & marking	Service brown with yellow/white stencilling

23 mm ammunition

Aircraft & Anti-Aircraft Ammunition
Aircraft Ammunition 23mm



23 mm caliber ammunition with percussion primer is compatible with 23mm Aerogun Model 1 and 2. The ammunition is normally used in belts comprising links type A. The ammunition is available in following three types.

- (i) TP (Target Practice)
- (ii) HEI (High Explosive Incendiary)
- (iii) API (Armour Piercing Incendiary)

Performance

Muzzle Velocity	720 m/s
Pressure	3000 Kg/cm²
Accuracy: (at 500 m)	
PE Vertical	0.5 m
PE Horizontal	0.5 m

Technical Data

Weight of complete round	315 gm (approx)
Length of complete round	200 mm (approx)

Projectile

Body Material	Steel
Weight	174 gm
Length	103 mm

Fuze

TP	Dummy
HEI	AP-24

Cartridge Case

Material	Brass 70:30
Weight	113 gm
Length	115 mm
Propelling Charge	Single Base Smokeless 4/7
Charge Weight	34 gm (approx)
Primer	WD 327

Packing

30 rounds (unbelted) packed in steel box M2A1 and 03 boxes in wooden crate:

Size of box	55 x 38 x 26 cm
Weight of box	50 Kg
Colour & marking	Service brown with yellow / white stencilling

30 mm ammunition

Aircraft & Anti-Aircraft Ammunition Aircraft Ammunition 30 mm



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

- Ball (Training)
- HEI (High Explosive Incendiary)
- API (Armour Piercing Incendiary)

Performance

The ammunition is fed into gun in link belts.

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

Accuracy:

PE Vertical	1.05 m
PE Horizontal	1.05 m

Technical Data

Weight of complete round	840 gm (Approx)	
Length of complete round	264-267 mm	
Projectile	Steel	
Identification:	Ball	White Band
	HEI	Red Band
	API	No Band
Fuze	Ball	PRF
	HEI	No. 6, Py-5, 6M
	API	No. 8
Weight	401- 416 gm	
Cartridge Case	Brass 70/30	
Propelling Charge	Single base propellant NCHN 5/7	
Weight of charge	96 gm	
Primer	Percussion type 330	

Packing (Without Links)

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

Size of wooden crate	55 x 37.5 x 26 cm
Weight of wooden crate	48 Kg

HEI/API: 27 rounds HEI-I/API packed in tin liner which is packed in a wooden box:

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

37 mm ammunition

Aircraft & Anti-Aircraft Ammunition
Anti Aircraft Ammunition 37mm HE/T



This ammunition is compatible to use with 37 mm field artillery AA guns Model 1955, including twin version. It is used against low altitude aircraft and missiles. It is also effectively used against ground targets.

Performance

Muzzle Velocity	866 m/s
Average chamber pressure	2800 Kg/cm ²
Maximum Range	8500 m
Accuracy:	
PE Horizontal	1.15 m
PE Longitudinal	1.05 m
Firing rate	180 Rounds/minute

Technical Data

Weight of complete round	1.417 kg (approx)
Length of complete round	381-385 mm (Approx)
Projectile	Forged steel
Main Charge	RDX/Aluminum
Tracer	No. 405 time ≥ 6 sec
Fuze	HE-I with SD mode (9-12 sec delay)
Weight of projectile	732 gm (Aprox.)
Cartridge Case	Brass 70/30
Propelling Charge	Single base propellant HN7/14
Primer	Percussion type No. 12 MK4 / LA (Modified)

Packing

Each round packed in waterproof re-useable plastic container. 20 rounds packed in a wooden box C-13/P

Size of box	46 x 36 x 30 cm
Weight of box	43 Kg
Colour & marking	Service brown with yellow/white stencilling

500 lb HEP aircraft bomb

Aircraft Ammunition

Bomb HE GP 500 LBS
(250 Kg) MK-P8 (Low Drag)



This is a multi-purpose bomb similar to US type MK82, having low aerodynamic resistance and is designed to be carried on supersonic aircraft. It is made from forged carbon steel according to BS-3602.

For high altitude missions, it is fitted with conventional fin assembly (Conical Fin Assembly MAU-938) and fuzes M-904 & 905. For low level missions, it is fitted with retarder fin assembly (MK-15 MOD-4) with nose fuze M-904. It can be used on all American bomb racks, French bomb racks (PM-3, PRK-12 & PRK-16) or Mirage aircraft having bomb hooks 14" apart. Can also be used with British aircraft bomb release slips having hooks with 14" spacing.

Technical Data

Length of bomb with:

i). Retarder fin assembly	2280 mm
ii). Conventional fin assembly	2210 mm

Bomb body diameter 275 mm

Weight of bomb with:

i). Retarder fin assembly	254.54 Kg
ii). Conventional fin assembly	241.36 Kg

Explosive charge, RDX/TNT 90 Kg (Approx)

Packing (Without Links)

6 bombs packed in steel fixture:

Size of steel fixture	1680 x 98 x 78 cm
Gross weight of steel fixture	1600 Kg
Colour & marking	Black with yellow / white stencilling

1,000 lb HEP aircraft bomb

Aircraft Ammunition

Bomb HE GP 1000 LBS

(500 Kg) PK-83 (Low Drag)



This is a multi-purpose bomb similar to US type MK83, having low aerodynamic resistance making them suitable for external carriage on supersonic aircraft. Steel casings are manufactured from high quality seamless tubes employing latest forging technology.

The bombs are compatible with NATO standard adapters booster, tail and nose fuze. For high altitude missions, it is fitted with Conical Fin Assembly. For low level missions, it is fitted with retarder fin assembly. It can be used on all American bomb racks, French bomb racks (PM-3, PRK-12 & PRK-16) or Mirage aircraft having bomb hooks 14" apart.

Technical Data

Length of Bomb Body without tail end	1784 ± 10 mm
Net Explosive Quantity	185 ± 10 Kgs
Filled Mass of the Bomb	410 ± 30 Kgs
Centre of Gravity of Filled Bomb	1040 ± 20 mm

Packing (Without Links)

03 x Mk-83 Aircraft bombs will be duly packed in steel fixture (crate).

Size of Crate	1.95 x 1.15 x 0.525 Mtr (Approx)
Gross Weight of Crate	1340 Kg (Approx)
UN. No	0034

Mortar bombs

Mortar Bomb
60 mm HE P2A1



This bomb is fired with 60 mm Mortar Model 1979 and use against personnel, providing fragmentation and blast effect.

Performance

Muzzle velocity	170 m/s
Pressure:	360 kg/cm²
Range:	2075 m
Accuracy:	
PE Longitudinal	1/70
PE (Lateral)	1/180

Technical Data

Complete Round

Weight with Fuze	1.37 Kg (Approx)
Length with Fuze	233 - 243 mm

Projectile

Body material	Cast Iron
Colour	Deep bronze green
Main Charge	TNT; DNN (42:58); 112 gm
Fuze	V 9 P1-A2 Impact fuze

Other Components

Primary cartridge	Double base propellant, WD-615
Augmenting charge	Double base propellant 5 ring shaped charges
Primer	No. 303 percussion type
Tail unit	10 steel fins

Packing

6 bombs are packed in waterproof chip/cardboard/plastic carrier with carrying handle and 3 x carriers (18 bombs) are further packed in a steel box:

Size of box	54.6 x 26.7 x 26.7 cm
Weight of box	39 Kg
Colour & marking	Service brown with yellow /white stencilling

60 mm smoke WP mortar bomb

Mortar Bomb
60 mm Smoke WP P2A2



This bomb is fired with 60 mm Mortar Model 1979 and is used to produce smoke for screening and spotting purposes.

Ballistics

Muzzle velocity	126 m/s
Pressure	260 ± 10 Kg/cm ²
Range:	1330 m
Accuracy:	
PE (Longitudinal)	1/160
PE (Lateral)	1/180
Smoke Duration	< 10 sec

Technical Data

Complete Round

Weight with Fuze	1.5 Kg (Approx)
Length with Fuze	240 ± 2 mm

Projectile

Body material	Cast Iron
Colour	Eau de nil – Sea Green
Main Charge	150 ± 20 gm (Approx)
Fuze	V 9 P1-A2 Impact fuze

Other Components

Primary cartridge	Double base propellant
Augmenting charge	Double base propellant 3 ring shaped charges
Tail unit	10 steel fins

Packing

9 x bombs are packed in waterproof chip/cardboard carrier with carrying handle and 2 carries (18 bombs) are further packed in a steel box:

Size of box	61 x 27 x 26 cm
Weight of box	43 Kg
Colour & marking	Service brown with yellow / white stenciling

60 mm illumination and signal mortar bomb

Mortar Bomb 60 mm Illuminating & Signal (Red & Green)



Canister Design Built In Fixed Delay (No Fuze)

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

Performance

Star ejection height	183 m
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Illuminating time:

i. Illumination round	35 - 45 sec
ii. Signal rounds	8 - 12 sec
Illumination power	125,000 to 150,000 cd

Technical Data

Complete Round

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

Main charge:

i. Illuminating	SR 562
ii. Green Signal	SR 429
iii. Red Signal	SR 406

Projectile

Body material	Seamless steel tube
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Identification:

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

Other Components

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

Packing

6 bombs are packed in waterproof chip/cardboard carrier with carrying handle. 3 x carriers (18 bombs) are further packed in a steel box:

Size of box	55 x 26 x 26 cm
Weight of box	30 Kg
Colour & marking	Service brown with yellow/white stencilling

81 mm HE mortar bomb

Mortar Bomb 81 mm HE M57D A2



This bomb is used against personnel and light material providing both fragmentation and blast effect and is fired with Hotchkiss Brandt mortar of the following types:

- i) MO-81-61 C Short barrel
- ii) MO-81 -61 L Long barrel

Performance

Velocity	291 m/s
Pressure	570 kg/cm ²
Range:	4550 m max
Accuracy:	
Longitudinal PE	32 m
PE (Lateral)	7.5 m

Technical Data

Complete Round

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

Projectile

Body material	Forged steel
Colour	Olive drab or deep bronze green
Explosive charge	681 gm of TNT (Approx.)
Priming Load/Exploader	56 ± 0.5 gm TNT 80.2 (2 x Pellets)
Fuze	V 19 PA-A2, Detonating direct action type with optional delay of 0.05 sec.
Primary cartridge	Double base propellant
Augmenting charge	7 horse shoe charges containing double base propellant
Tail unit	10 Aluminium alloy fins

Packing

3 x bombs are packed in waterproof cardboard/plastic container with carrying handle and 2 carriers (6 bombs) are further packed in a steel box:

Size of box	46 x 23 x 32 cm
Weight of box	29 Kg
Colour & marking	Service brown with yellow /white stencilling

81 mm smoke WP mortar bomb

Mortar Bomb
81 mm Smoke WP



This bomb produces smoke for screening and spotting purposes and is fired with Hotchkiss Brandt mortars of the following types:

- i). MO-81-61 C Short barrel
- ii). MO-81 -61 L Long barrel

Performance

Velocity	291 m/s
Pressure	570 kg/cm²
Range	4550 m max
Accuracy:	
Longitudinal PE	32 m
Lateral PE	7.5 m
Smoke duration	35 sec (minimum)

Technical Data

Complete Round

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

Projectile

Body material	Forged steel
Colour	Sea green or Eau-de-nil
Charge	WP, 650 ± 25 gm
Bursting charge	10 ± 3 gm CE (1 x Pellet)
Fuze	V 19 PA-A2, Impact & Delay 0.05 sec Optional

Other Components

Primary cartridge	Double base propellant
Augmenting charge	7 horse shoe charges containing double base propellant
Tail unit	10 Aluminium alloy fins

Packing

3 bombs packed in waterproof chipboard/cardboard carrier with carrying handle and 3 carriers (9 bombs) packed in a steel box:

Size of box	34 x 34 x 44 cm
Weight of box	50 Kg
Colour & marking	Service brown with yellow / white stencilling

81 mm illumination and signal mortar bomb

Mortar Bomb

81 mm Illuminating, Signal
(Red & Green)



Canister Design Built In Fixed Delay (No Fuze)

These bombs are used with 81mm mortar and are available in three types. Illuminating bombs provide illumination during night while red & green bombs are used for signaling.

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

Performance

Illuminating: Average delay time for ejection of star 15 ± 1.5 sec. Average burning time of star 50 ± 8 sec.

Signal Red & Green: Average delay time of ejection of star 6 ± 1 sec. Average burning time of star 10 ± 2 sec.

Technical Data

Complete Round

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

Projectile

Body material	Seamless steel tube
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Identification:

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

Main charge:

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

Other Components

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

Packing

3 bombs packed in waterproof chipboard/cardboard carrier with carrying handle and 2 carriers (6 bombs) are further packed in a steel box:

Size of box	45.5 x 22.3 x 31.7 cm
Weight of box	25 Kg
Colour & marking	Service brown with yellow /white stenciling

120 mm HE mortar bomb

Mortar Bombs

120 mm HE M 44 A2



This bomb is suitable for use with Mortar AM-50 (Brandt) with 1.75 meter barrel length and is used against personnel and light material creating fragmentation and blast effect.

Performance

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

Accuracy

PE (Range)	50 m
PE (Lateral)	13 m

Technical Data

Complete Round

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

Projectile

Body material	Forged steel
Colour	Deep bronze green
Exploser charge	TNT Pellets
Main Charge	TNT, 2.6 Kg
Fuze	V 19P A2, SQ / delay

Other Components

Primary cartridge	CL-3, Ballistite 74 gm (Approx)
Augmenting charge	7 charges of 75 gm (Approx) each of Ballistite GB Pa in Cellunyl horse shoe container
Tail unit	12 steel fins (6 pairs)

Packing

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

Size of box	82.0 x 32.3 x 15.8 cm
Weight of box	42 Kg (Approx)
Colour & marking	Service brown with yellow/white stencilling

120 mm smoke WP mortar bomb

Mortar Bombs

120 mm Smoke M 44 A1



This bomb is suitable for use with mortar AM-50 (Brandt) with 1.75 meter barrel length and produces smoke for screening and spotting purposes.

Performance

Muzzle velocity at charge 7	331 m/s
Max pressure	820 kg/cm ²
Chamber pressure for performance proof tests:	
Strength	920 ± 20 kg/cm ²
Charge stability	920 ± 20 kg/cm ²
Detonation	820 kg/cm ²
Max. range	6745 m
Accuracy :	
PE (Range)	50 m
PE (Lateral)	13 m

Technical Data

Complete Round

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

Projectile

Body material	Forged steel
Colour	Eau de nil to shade 218 to BS - 381C
Exploder charge	C.E Pellets
Main Charge	2.6 kg white phosphorus (WP)
Fuze	V19 P A2, SQ / delay

Other Components

Primary cartridge	CL-3, Ballistite, 74 gm (approx)
Augmenting charge	7 charges of 75 gm. each of Ballistite GB Pa in cellulynl horse shoe container
Tail unit	12 steel fins (6 pairs)

Packing

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

Size of box	79.50 x 33.6 x 34.4 cm
Weight of box	47.10 Kg (Approx)
Colour & marking	Service brown with yellow/white stencilling

Mortar training bomb - inert

Mortar Bombs

Training (Inert)

60, 81, 120 mm



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

Technical Data

Complete Round	60 mm	81 mm	120 mm
Weight with PRF (Kgs)	1.37	3.2	13
Length with PRF (mm)	240 ± 2	382	676
Projectile material	Cast Iron	Cast Iron	Forged Steel
Color	Artic blue	Artic blue	Deep saxe blue
Main charge	HES (Sand + Wax)	HES (Sand + Wax)	HES (Sand + Wax)
Fuze (PRF)	Alluminium Alloy	Alluminium Alloy	Alluminium Alloy
Primary Charge	Double base propellant	Double base propellant	Double base propellant
Augmenting charge	Nil	Nil	Nil
Range	180 ± 20	200 ± 20	200 ± 20

Packing

Size of Box (mm)	54.6 x 26.7 x 26.7	26.0 x 7.4 x 21.5	82.0 x 32.3 x 15.8
Weight of Box (Kgs)	39	29	42
No of Rds in box	18	06	02
Colour & Marking	Service brown with white stencilling		

Tank and anti-tank ammunition

Tank Ammunition

105 mm HE/TK P1A1



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

Performance

Muzzle velocity	683 ±15 m/s
Average chamber pressure	1800 kg/cm ²
Max Range	10400 m
Dispersion:	
PE/Range	1/190 m (max)
PE Lateral	15 m (max)
Accuracy at 1000 m:	
SD (Vertical)	0.36 meters
SD (Horizontal)	0.36 meters

Technical Data

Length of Complete Round	1020 mm (Approx)
Weight of Complete Round	24.21 Kg
Shell Body	Forged Steel 12 Kg (Approx)
Fuze	PDM 557 percussion type
Length of Projectile	490 mm
Weight of Projectile	14.94 Kg (with fuze)
Weight of Filling	TNT 2.04 Kg
Cartridge Case	Drawn Brass 70 / 30
Propelling Charge	M1-IMP
Weight of Propellant	3 ± 0.10 Kg
Primer	Electric type L20-A1

Packing

Each round is placed in a chip board container and further packed in a steel box.

Size of box	118 x 21 x 19 cm
Gross weight	46.9 kg (Approx)
Colour & marking	Service brown with yellow / white stenciling

105 mm APFSDS ammunition

Tank & Anti Tank Ammunition
105 mm APFSDS P1A1



APFSDS (Armour Piercing Fin-Stabilized Discarding-Sabot) is a Kinetic Energy Fin Stabilized Round and can be fired from 105mm L7 series rifled tank gun fitted on many current MBTs such as Leopard, Vickers, MK 1&3, M60 (Manufactured under license in USA as M68), early M1, updated M 48, Merkava and re-gunned T-54 and T-69 series.

Performance

Muzzle velocity	1490 m/s
Average chamber pressure	4340 kg/cm ²
Effective Range	3500 meter
Accuracy at 1000 m:	
SD (Vertical)	0.3 m
SD (Horizontal)	0.3 m
Penetration	300 mm, against RHA target at zero obliquity, confirming to DEF-STAN 95-13/2

Technical Data

Length of Complete Round	946 mm
Weight of Complete Round	18.91 Kg
Projectile	Tungsten Alloy core with discarding sabot and fin stabilization
Length of Projectile	486 mm
Weight of Projectile	6.12 Kg
Cartridge Case	Drawn Brass 70/30
Propelling Charge	Triple base multi tubular NQ/M .046
Weight of Propellant	5.62 Kg (Nominal)
Primer	Electric Type L20 A1
Penetrator (Tungsten Alloy)	Density 17.4 ± 0.15 gm/cm ³

Packing

Each round placed in a chip board container and further packed in a steel box:

Size of box	105 x 20 x 19 cm
Gross weight	37.75 Kg (Approx)
Colour & marking	Service brown with yellow / white stenciling

125 mm HE-FS/TK ammunition

Tank Ammunition

125 mm HE FS TK



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

Performance (at full charge)

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

Technical Data

Length of Complete Round	1106 mm
Weight of Complete Round	34 Kg (approx)
Shell Body	Forged Steel
Fuze	DRH-05, PD type
Length of Projectile	700 mm
Weight of Projectile	23 Kg
Weight of Filling	TNT 3.051 Kg
Case	Semi combustible cartridge case with Steel base and cover
Propelling Charge	Consist of single base propellant in tubular bundle and granular form, 14/19, (16/1.35 Tubular)
Primer	Electric Percussion No. DJD-2

Packing

Charge structure is packed in fiber glass sealed humidity proof container and projectile is packed in steel box. Fuze is packed separately and is placed at one end of the same steel box.

Size of box	67 x 44 x 25.5 cm
Gross weight of box	59 Kg
Colour & marking	Service brown with yellow / white stenciling

125 mm APFSDS ammunition

Tank & Anti Tank Ammunition
125 mm APFSDS/T



APFSDS (Armour Piercing Fin-Stabilizer Discarding-Sabot) is a Kinetic Energy Fin Stabilizer Round and can be fired from 125mm smooth bore tank guns, T- 80 UD (Ukraine), Al Khalid ISDELA PT-91 (Poland) and T-84 (China) or equivalent.

Performance

Muzzle velocity	1730 ± 5 m/s
Chamber pressure at 21°C	4850 ± 50 kg/cm²
Effective Range	2000 m
Accuracy at 1000 m:	
SD (Vertical)	0.3 m
SD (Horizontal)	0.3 m
Penetration	460 mm, against RHA target at zero obliquity, confirming DEF-STAN 95-13/2

Technical Data

Length of Complete Round	1086 mm
Weight of Complete Round	21.47 Kg
Projectile	Tungsten Alloy core with discarding sabot and fin stabilization
Length of Projectile	555 mm
Weight of Projectile	7.37 Kg
Penetrator (Tungsten alloy)	Dual density: Tail ≥ 17 gm/cm³, Head ≥ 17.5 gm/cm³

Main Cartridge Case:

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

Secondary Cartridge Case:

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

Packing

Main Charge Structure and Secondary Charge Structure are packed separately in fiber glass sealed humidity proof container then are packed in a steel box.

Size of box	82 x 50 x 26 cm
Gross weight	53 Kg (Approx)
Colour & marking	Service brown with yellow /white stenciling

Tungsten penetrators

Tungsten Alloy Penetrators & Rod



has established capacity for producing Single/Double Density Tungsten Alloy Cores (Penetrators) of all types. At present following type of penetrators are being produced:

Caliber	Density (gm/cm ³)	Specification	Penetration
100mm APFSDS	17.4 (Approx)	W91.5NE	300 mm Min
105mm APFSDS	17.4 (Approx)	W91.5NE	300 mm Min
125mm APFSDS	17-18 (Approx)	WMB-101 JTS	460 mm Min

Tungsten Alloy Rods	Ø = upto 35 mm	Density Range
(W+Ni+Fe or W+Ni+Cu)	L = upto 800 mm	17-18 gm/m ³ (Approx)

Strict Quality Control following International Quality Management System yields Penetrators of highest quality.

Each Penetrator is checked for internal flaws and surface cracks applying latest Internationally accepted Ultrasonic Flaw Detection and Dye Penetration Inspection methods.

Important dimensions are checked with electronic probes and compared with Master Standard reference by means of a projector.

Grenades, demolition and pyrotechnics

Grenade Hand
AP HE P2 A1 (ARGES-84)



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

Technical Data

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

Packing

Each grenade packed in a plastic container, 12 such containers packed in a steel box:

Size of box	33.5 x 26.5 x 14.5 cm
Weight of box	11 Kg
Colour & marking	Service brown with yellow / white stencilling

Target-indication hand grenade

Grenade Hand Target Indication MK-2



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

Available in following colours:

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

Technical Data:

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

Packing

Each grenade packed in a plastic container, 20 such containers are packed in a wooden/Steel box

Size of box	60 x 29 x 19 cm
Weight of box	19 Kg
Colour & marking	Service brown with yellow /white Stencilling

WP discharger hand grenade

Grenade Hand
Discharger WP P3 MK1



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

Technical Data

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

Packing

Each grenade packed in a tin/ plastic container, 20 such containers are packed in a steel box:

Size of box	60 x 29 x19 cm
Weight of box	22 Kg
Colour & marking	Service brown with yellow /white Stencilling

Beehive demolition charge

Demolition

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



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

Technical Data

Weight of explosive	3.2 Kg (Approx)
Charge	Compo B
Total weight	3.250 Kg (Approx)

Packing

2 charges packed in a cylinder and two cylinders (4 charges) packed in a wooden box:

Size of box	51 x 44.5 x 26 cm
Weight of box	33 Kg
Colour & marking	Service brown with yellow / white stencilling

CE primer

Demolition

Demolition 1 OZ CE Primer



This is used for detonation of high explosive charges and consists of pure tetryl.

Technical Data

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

Packing

Each primer wrapped internally and externally with lead free paper. Top & bottom covered with lead free and waxed paper washers to make it completely waterproof. 10 primers packed in a metallic cylinder, 6 cylinders (60 primers) packed in a cardboard carton:

Size of carton	37.4 x 15.3 x 18 cm
Weight of carton	8 Kg
Colour & marking	Service brown with yellow / white stencilling

Tripwire flare

Pyrotechnics

Flare Trip Wire MK 2/2



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

Technical Data

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

Packing

Each flare placed in carton, further packed in a tin box with arm link assembly and one trip wire spool with cardboard fitments. 12 flares packed in a steel box:

Size of box	67 x 28 x 25 cm
Weight of box	34 Kg
Colour & marking	Service brown with yellow / white stenciling

Signal-pencil cartridges

Pyrotechnics

Cartridge Signal Pencil Shooting Type



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

Available in following types:

- Red
- Green
- Illuminating

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

Technical Data

Burning time	5.5 sec
Height to which ejected	70 m

Packing

216 cartridges packed in a steel box:

Size of box	29.2 x 19.7 x 21.7 cm
Weight of box	6 Kg
Colour & marking	Service brown with yellow / white stencilling

Fuzes, primers and detonators

Fuze, Primers & Detonators



Detonators

Type	Utilization
Detonator M-17	Fuze PDM 557
Detonator M-24	Fuze PDM 557
Detonator No. 32	81 & 120 mm Mortar Bombs
Detonator No. 108	37 mm HE/T
Detonator No. 137	37 mm HE/T
Detonator No. 237	37 mm HE/T
Detonator No. 208	60 mm Mortar Bomb

Fuzes

Type	Utilization
No. 6 & 8	30 mm HEI API
HE-1	37 mm HE/T
V9P1/A2	60 mm Mortar Bomb HE & Smoke
V 19 PA-A2	81 mm Mortar Bomb HE & Smoke
PDM 557 M	25 PDR HE
PDM 557	105 mm HOW HE & Smk, 155 mm HOW HE
L 56	105 mm TK HESH
V 19 P A2	120 mm Mortar Bomb HE & Smoke
LIU 4	122 mm HOW HE T-54 & D-30
LIU 5	130 mm HE
PF- 1A Proximity	105 mm HE & 203 mm HOW HE

Primers

Type	Utilization
Percussion type No. 304 A-1	122 mm HOW HE
Percussion type D-5	130 mm Gun HE & 122 mm HOW D-30
Percussion type MK2A4	155 mm HOW HE
Percussion type P-6	106 mm HEAT
Electric type L20 A1	105 mm APFSDS
No. 303	60,81 & 120 mm Mortars
No. 12 MK4/LA	37 mm HE/T
No. P1 MK3	105 mm HOW HE, Smk & Blank
No. 330	30 mm Ball & HEI
Percussion type No. M-82	155 mm HOW & 8" HOW
Prime rPercussion type P-5	100 mm APFSDS

Military explosives and propellants

Military Explosives

EXPLOSIVES

S. No.	Type of Explosive	Specification	Melting point	Utilization
1	TNT	DEF-STAN 07-4/1(a)	80.2 – 80.4°C	Manufactured in the form of flakes suitable for filling shells, bombs and for preparation of different compositions with RDX.
2	RDX	DEF-STAN 07-23	201-208°C	Crystalline product used for manufacture of plastic explosive like PE-3A, and compo A&B.
3	COMPO B 1. RDX/TNT 60:40 2. RDX/TNT 70:30	CS 5446 (b) Pak Explo-38A (a)	- -	Manufactured in the form of flakes and biscuits. Suitable for filling shells and bombs.
4	RDX/WAX/AI No. 2 71:9:20	DEF-STAN 07-31	-	Filling of shells.
5	PE-3A (Plastic Explosives)	CS 2436 A(a)	-	Demolition works.
6	PETN	DEF-STAN 07-08/1	139-142°C	Crystalline products used in the manufacture of detonators and Fuses.
7	PETN Plasticised	Pak Explo 31	-	Filling of Hand Grenades.
8	Tetryl (CE)	DEF-STAN 13-165/1	128.5- 129.1°C	Manufactured in granular form. Pressed tetryl pellets are used in different primers, detonators, bombs and shells.
9	Picrite	DEF-STAN 07-12/1	-	Manufactured in the form of fine white powder (Nitro Guanidine) triple base propellant.
10	Gun Powder G-7, G-12, G-20,G-40, GP-Mealed Sulphurless/ G.P Sulphurless/M.P	DEF-STAN 13-167/1 DEF-STAN 13-166/1		Suitable for use in various primers and pyro compositions.
11	Styphnic Acid	DEF-STAN 07-50/1	176-181°C	Lead salt of this acid is used in the preparation of Cap composition for different ammunition.
12	Di-Nitro-Resorcinol	DEF-STAN 13-43 (b)	146-148.5°C	Used in initiator composition.
13	RDX/WAX 95.5 RDX/WAX 96:4 RDX/WAX 98:2	PAK EXPLO 32 PAK EXPLO 55		Manufacture in the form of grains, used for filling of Shells.
14	Strontium Peroxide	DFF-STAN 13-15/1		Used in tracer Compositions

Mortar propellants

Propellants

Mortar Bombs and Rockets

Mortar Bombs

S. No.	Description	Type, Shape and Major Characteristic	Applicable Specifications	Applicable Weapons
1	Propellant for 60 mm Mortar	Strips 10-2.5/33, perforated Mortar Gun rings 10-24/48 separation disk 11 x 46 x 100	60 mm	WJ 19-67W (chinese)
2	Propellant for 81 mm Mortar	Ballistite GB Pa(1.5), Ballistite GB Pa(2.5)	81 mm Mortar Gun	Hotchkiss Brandth No. 922103, 922104
3	Propellant for 120 mm Mortar	Ballistite GB Pa(2.5), Ballistite GB Pa(8)	120 mm Mortar Gun	Hotchkiss Brandth No. IU-922106 PAK Ammo-134

Rockets

1	Propellant for 122 mm Rocket	Types SQ-2, extruded solventless double base, single perforated cylindrical grains with ends inhibition	6m -21 Field MBRL	WE-1017 JTW (Chinese)
2	Propellant for 40 mm antitank rocket assisted HEAT projectile type 69	Double base solventless expelling and booster charges	RPG-7 Launcher	WE 131 JTW (Chinese) Pak Ammo-104, 136
3	Propellant for cartridge RG 7.62 x 51 mm P2A1	Double base smokeless powder Ballistite 3.5	G3A3 Rifle	Pak Ammo-123
4	Propellant for 73 mm FSRA HEAT round SPG-9	Double base solventless expelling and booster charges	SPG-9 Launcher	Pak Ammo-124, 125

Small Arms Ammunition

1	NC-1055	Single base, Single perforated grains, deterrent coated	7.62x51 mm Ball & 7.62x51 mm Tracer	Pak Ammo-86(c) Pak Ammo-76(F) Firing (ballistics)
2	NC 1111	Single base, square flakes	12 bore cartridge	TM 826 (Bofars)
3	P-2 MK 2Z	Single base cylindrical grains	9 mm MP5A2 Sub machine gun	Pak Ammo-117
4	HN 4/7	Single base, 7 perforated cylindrical grains	12.7x108 mm	WJ 16-67W (Chinese)
5	HN 5/7 Glazed (Chinese design)	Single base, 7 perforated cylindrical grains	Practice, API & HEI cartridges for 30 mm, aircraft gun ammunition	WJ 16-67W (Chinese)
6	P-3	Single base, cylindrical grains	7.62 x 51 mm Blank	Pak Ammo-122

Small-arms propellants

Propellants

(For Guns & Howitzers Ammunition)

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
1	HN7/14 (Chinese design)	Single base 14 perforated rosette grains	Cartridges for anti 37 mm aircraft machine gun	WJ 7-67 W (Chinese)
2	P-1	Double base, 7 perforated cylindrical Grain	Cartridge 106 mm HEAT	Pak Ammo 75
3	NQ/M 0.046	Triple base, 7 perforated cylindrical grains	100 mm tank gun APFSDS ammunition & 105 mm Tank gun APFSDS ammunition	P-323 A(g) U.K
4	Prop M1 SP & MP	Single base with DNT, single & 7 perforated grains	Charges for 105 mm HOW M67	Pak Ammo 98
5	4/1 & 9/7	Single base single & 7 perforated grains	122 mm charges	WJ-17-67 W (Chinese)
6	12/1 & 9/7	Single base single & 7 perforated grains	130 mm S.R gun charges	WB-005 PFI WJ-17-67 W (Chinese)
7	Prop 3-23/1-37	Double base solventless single perforated	130 mm L.R gun charges	WJ-18-64
8.a	Prop M1 SP (0.0157 inch)	Single base with DNT, single perforated grains with flash reducing agent	155 mm HOW for charges M3A1 (green bag)	MIL-STD 652 D(AR) MIL-C-60418 B(AR) JAN-P-309
8.b	Prop M1 MP (0.0336 inch)	Single base with DNT, 7 perforated grains with flash reducing agent	155 mm HOW for charges M4A2 (white bag)	MIL-P-60397 B(AR) JAN-P-309
9.a	Prop M1 SP (0.0171 inch)	Single base with DNT, single perforated	203 mm HOW for charges M1 (green bag)	MIL-STD 652 D(AR) MIL-P-46698 MU JAN-P-306
9.b	Prop M1 MP (0.043 inch)	Single base with DNT, multi perforated	203 mm HOW for charges M1 (white bag)	MIL-STD 652 D(AR) MIL-C-46695 A(MU) JAN-P-309
10	Propellant for 100/105 mm HESH	Single base with DNT, 7 perforated	Charges for mm 100/105 HESH	P-328
11	Propellant 3-18/1-26 for 100 mm HE	Double base solventless single perforated	100 mm HE	WJ-18-67W (Chinese)
12	Propellant 19/1-25 & 16/19	Single base, single hole sticks of 250 mm, length & 19 hole hexagonal Grains	125 mm APFSDS	WMD 603 AJT

Gun and aircraft-ammunition propellants

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
13	Propellant 16/1-35 & 14/19	Single base, single hole sticks of 350 mm, length & 19 hole hexagonal Grains	125 mm HE	WMD 603 AJT
14	Propellant 4/1 & 9/7	Single base, single hole grain & 7 hole grain	122 mm HOW D-30	Pak Ammo-137
15	Prop M6-MP (0.055 inch)	Single base with DNT, cylindrical grains with 7 longitudinal perforations with flash reducing agent	155 mm HOW for charges M119A2 (Red Bag)	Pak Ammo-130
16	Prop 12/1-27 & 12/7	Single base, single hole sticks of 265 mm length & 7 longitudinal perforations cylindrical grains	122 mm HOW D-30 FC	Pak Ammo-139 Pak Ammo-138
17	Propellant 3/1	Single Base	122 mm HOW D-30	Pak Ammo-135
18	Prop M11MP (0.0336 Inch)	Single Base multi Perforated with DNT	105 mm TK HE	Pak Ammo-60

Propellants - Small Arms Ammunition

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
1	NC-1055 for 7.62 x 51 mm Ball & Tracer Ammo.	Single base, Single perforated grains, deterrent coated	G3A3 and MG-3	Pak-Ammo. - 86 (c) Pak-Ammo. -76 (F) (Ballistics)
2	P-3 for 7.62 x 51 mm BLANK Ammo	Single base, cylindrical grains	G3A3 and MG-3	Pak Ammo-122
3	Pyroxyly Powder for 7.62 x 39 mm Ammo	Single base, Single perforated grains, deterrent coated	7.62 x 39 mm SMG Chinese Ammo	Pak Explo.-57
4	NC-1055 for 7.62 x 54 mm Ammo	Single base, Single perforated grains, deterrent coated	7.62 x 54 mm HMG Ammo	Pak Ammo.-86 (c)
5	NC1111	Single base, square flakes	12 Bore Gun	TM-826
6.	P-2 Mk-1Z & 2Z for 9mm	Single base cylindrical grains	Walther Pistol and MP5A2 Sub Machine Gun	Pak Ammo.-117
7	HN 5/7 Glazed (Chinese design)	Single base, 7 perforated cylindrical grains	30 mm Aircraft Gun	WJ 17-67 (W)

Explosive compositions and support products

Propellants - for Guns & Howitzers Ammunition

1	CBI for 125 mm APFSDS & HE Ammo	Single base, Single perforated grains, deterrent coated	125 mm Tank Gun	Pak Ammo-133
2	CBI for 155 mm HOW Ammo.	Single base, square flakes	155 mm HOW	Pak Ammo.-127
3.	Propellant for 23 mm Ammunition	Single base, Single perforated, cylindrical grains	23 mm Aircraft Gun	EPD-1
4	NQ/M 0.046 for 100 mm APFSDS & 105 mm APFSDS Ammo.	Triple base, 7 perforated cylindrical grains	100 mm & 105 mm Tank Gun	P-323 A (g)
5.	WM-017 for 105 mm & 122 mm HOW (BLANK) Ammo.	Double base Propellant cords	105 mm Gun & 122 mm HOW	P/331-1
6.	Propellant 3/1 for 122 mm HOW	Single base, Single perforated grains	122 mm HOW (D-30)	Pak Ammo.-135
7.	NQ-018 & NQ-050 for 25 Pdr Ammo.	Triple base Propellant cords	25 Pdr Gun	P-323 A (g)
8.	P-1 for cartridges 106 mm HEAT	Double base, 7 perforated Cylindrical Grains	106 mm R.R	Pak Ammo.-75

Commercial explosives and chemicals

Commercial Explosives and Industrial Chemicals

Nitroglycerine Based Dynamites

S-3 (Seismic Explosive)

The severe conditions encountered in oil prospecting demand explosives of a special type. S-3. The seismic explosive manufactured by [REDACTED] is the best answer to such demands. S-3 has excellent water resistance and is capable of withstanding extremely high hydrostatic pressure. It is cartridge in specially designed high density rigid plastic tubes which can be coupled with one another to make the desired length of the column of charge.

Technical Data

Density	1.50-1.55 g/cc
Gas Volume	520 lit./kg
V.O.D (Unconfined)	+5500 m/sec
Sensitivity	Detonator No. 8
Consistency	Gelatinous



Wabox

Wabox is suitable for all types of rock blasting operations. It is manufactured in different grades, i.e. 80, 60 and 40 percent. These explosives have excellent blasting properties, so highest level of safety in handling and transportation as well as in storage is maintained. They are meant for hard and medium hard rocks and are suitable in dry and wet conditions for quarrying, stripping and underground mining. These explosives give excellent results in underwater blasting as well. All grades of Wabox are manufactured according to the requirements of the customers.

Technical Data

Density	1.40-1.45 g/cc
Gas Volume	860 lit./kg
V.O.D (Unconfined)	+5000 m/sec
Sensitivity	Detonator No. 8
Consistency	Gelatinous



Wabofite

Wabofite is an oxygen-balanced semi-gelatinous dynamite. It is employed for pre-splitting, smooth and controlled blasting. It can also be used as a base charge in medium, hard and soft rocks. In dry and wet bore holes it is also used as a column charge in quarrying and is ideal for tunnel blasting.

Technical Data

Density	0.90-1.00 g/cc
Gas Volume	873 lit./kg
V.O.D (Unconfined)	3000-3500 m/sec
Sensitivity	Detonator No. 8
Consistency	Semi Gelatinous



All explosives are available in cartridge (paper/polyethylene) of dimensions 25 mm x 200 mm, 32 mm x 200 mm, 50 mm x 500 mm, 63 mm x 500 mm & 75 mm x 500 mm. S-3 is also available in hard plastic tubes of 57 mm x 410 mm.

Wabonite

Commercial Explosives and Industrial Chemicals

Powder Explosives

Wabonite

Wabonite is a low-density explosive of relatively high weight strength, well suited mainly as column charge in all types of rocks where conditions are moderately dry. It is a non-cap sensitive explosive and requires a primer for initiation. Wabonite has excellent storage properties and offers maximum safety in handling and transportation.

Technical Data

Density	0.90g/cc - 0.95 g/cc
Gas Volume	918 lit./kg
V.O.D (Unconfined)	3000 m/sec
Sensitivity	Primer Required
Consistency	Powder



Wapril (ANFO)

Wapril is a mixture of Ammonium Nitrate and fuel oil having a special sensitizer designed to give optimum blasting performance. Wapril is a low cost explosive which is extensively employed as column charge in all types of rock blasting operations and is particularly used as main charge (with primer) in large diameter hole blasting.

Technical Data

Density	0.80 g/cc - 0.85 g/cc
Gas Volume	988 lit./kg
V.O.D (Unconfined)	2500 m/sec
Sensitivity	Primer Required
Consistency	Prills



Powder explosives are available in polyethylene tubes of 50mm x 500mm, 63mm x 500mm & 75mm x 500mm. It is also available in 25 Kg Polyethylene lined bags.

Emulite 150 / 150(G)

Commercial Explosives and Industrial Chemicals Emulsion Explosives

Emulite - 150 / Emulite - 150 (G)

This cap sensitive explosive has plastic consistency and is very suitable for achieving high loading density. It has excellent blasting properties. It can be used as bottom charge for any kind of blasting. Due to its consistency and high water resistance, it can be confidently employed for deep underwater blasting.

Technical Data	EMULITE-150	EMULITE-150 (G)
Density	1.25 g/cc	1.25 g/cc
Gas Volume	830 lit./kg	860 lit./kg
V.O.D (Unconfined)	5000-5500 m/sec	4600-5000 m/sec
Sensitivity	Detonator No. 8	Detonator No. 8
Consistency	Emulsion	Emulsion

Emulite-100 / 100 (G)

Suitable for pre-splitting, smooth and controlled blasting. In dry and wet bore holes it is also used as a column charge and is ideally suited for tunnel blasting.

Technical Data	Emulite-100	Emulite-100 (G)
Density	1.20 g/cc	1.20 g/cc
Gas Volume	900 lit./kg	932 lit./kg
V.O.D (unconfined)	5000-5500 m/sec	4500-5000 m/sec
Sensitivity	Detonator No. 8	Detonator No. 8
Consistency	Emulsion	Emulsion



Seismic Emulite (ES-3)

Seismic emulsion explosives meet the highest standard of safety required in rough and tough conditions of seismic prospects. Seismic Emulite has excellent storage properties especially for high temperature and humid climate.

Technical Data

Density	1.20 – 1.24 g/cc
Volume	796 lit./kg
V.O.D (Unconfined)	> 5400 m/sec
Sensitivity	Detonator No. 8
Consistency	Emulsion

Permissible Emulite (E-408)

Emulite-408 is of special composition for use in gassy coal mines. It produces short lived detonation flames and prevents firedamp or coal dust explosion in underground coal mines. This explosive can be employed in underground mining of other ores as well.

Technical Data	E-408
Density	1.12-1.15 g/cc
Gas Volume	820 lit./kg
V.O.D (unconfined)	4400 m/sec
Sensitivity	Detonator No. 8
Consistency	Emulsion

All explosives are available in cartridges (paper/polyethylene) of dimensions 25 mm x 200 mm, 32 x 200 mm, 50 mm x 500 mm, 63 mm x 500 mm & 75 mm x 500 mm.



ES – 3
(Seismic Emulite)

Wabocord detonating cord

Commercial Explosives and Industrial Chemicals

Blasting Accessories

Wabocord (Detonating Cord)

Wabocord consists of a core of high explosive contained in polythene and wrapped in various layers of cotton/jute yarn. The detonating cord is then coated with PVC, giving it a high tensile strength and making it water proof. The structure of Wabocord assures its efficient field performance as it is unaffected by both heat and cold within a wide range of temperatures i.e. from -60°C to 30°C.

Technical Data

Velocity of detonation	6000-7000 m/sec
Water resistance	Water proof, can withstand pressure of 25 meter water head for 48 hours
Explosive grammage	10±1 g/m
Packing:	4 reels of 250 meters each, packed in a cardboard box. Also available in 20 and 40 g/m



Safety Fuse

Safety fuse consists of a central core of specially formulated black powder with jute and cotton countering. Water proofing is done by bitumen, wax as well as PVC. It is designed to propagate flame to the plain detonator within specified time limits.

Technical Data

Burning Time	100-120 sec/m and dry conditions
Coating	PVC/ Bitumen
Packing:	4 reels of 250 meters each, packed in a cardboard box.



MS/Hs Electric Delay Detonators

Milli second and half second delay detonators are meant to effect delayed blasting action in multi-row bench blasting and tunneling. This action greatly improves blasting results as better fragmentation and ground vibration control is achieved. MS delays are used only for surface blasting while in underground blasting, a combination of both MS and HS detonators is employed.

MS Delay Electric Detonators

Period	Delay Time	Internal	Standard leg wise
1-20	25-500 ms	25 ms	3.5 mtr

HS Delay Electric Detonators

1-10	500-5000 ms	500 ms	3.5 mtr
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Electric and non-electric detonators

Commercial Explosives and Industrial Chemicals

Detonators

Detonator No. 8 (Plain)

Standard type Plain Detonator No. 8 consists of a base charge of high explosive and a primer charge of an initiating explosive pressed into an Aluminum tube. It is used with safety fuse.

Technical Data

Length of Aluminium casing	38 ± 1 mm (Nominal)
Outer Dia	7 ± 0.1 mm
Use	In combination with safety fuse

Packing

100 Dets. are packed in a smaller card box. 50 small boxes are packed in a master cardboard box containing a total of 5000 detonators.

Electric Detonator No. 8

Electrical energy is required to initiate electric detonators. The advantage of electric firing over firing with safety fuse and plain detonator is that several shots can be connected up and fired simultaneously with much greater control over the blast.

Technical Data

Length of Aluminum casing	45 ± 0.6 mm
Standard Leg Wire	3 mtr.
Outer Dia	7 ± 0.1 mm

Packing

10 Dets. are packed in a smaller card box. 50 small boxes are packed in a master cardboard box containing a total of 500 detonators.



Seismic Detonators

Seismic Detonators are specially formulated, high density, high energy, detonator sensitive seismic explosive designed exclusively to meet the rigid requirements and environmental extremes associated with geophysical exploration. Offering moderate velocity and extraordinarily low gas production, they improved seismic energy across usable bandwidth for superior final data as well as improved signal-tonoise ratios.

Material	Aluminum
Length	45 - 45.7 mm
Diameter	7.0 - 7.2 mm
Available in 4.5, 12, 24 and 30 meters wire length.	

Leher non-electric initiation system

Commercial Explosives and Industrial Chemicals

Leher Ignition System

Leher is the trade name of the latest "Non-Electric Initiation System"

Advantages

- No stray current or radio transmission hazards
- No side initiation.
- No noise problem.
- Simple and rational connections.
- No limits on the size of blast round.

Varieties of Leher Ignition System

- Leher GD/MS
- Leher MONODET
- Leher Instantaneous



Leher GD/MS

Period No	Delay Time (ms)	Interval (ms)	Standard Tube length (mt.)	
1-20	25-500	25	5,10,15,20,25	

Leher Monodent

Description	Basic Detonators		Surface Delays/Connectors		
Code	MD 475	MD 500	SD 0	SD 25	SD 50
Delay Time ms	475	500	0	25	50
Colour	-	-	Yellow	Blue	Red

Leher Instantaneous

For specific operations, Leher Instantaneous are also available in various tube lengths.

Packing

10 detonators are vaccum packed in Polythene bag. Leher with tube lengths above 10 mtr
05 Nos dets are vaccum packed in Polythene bag
10 Polythene bags are packed in a cardboard box.



Formaldehyde

Commercial Explosives and Industrial Chemicals Chemicals (Polymers)

Formaldehyde - FA 37%

Applications

General purpose formalin is suitable for Tanneries, Poultry/Sugar Industries and for manufacturing Urea and Phenolic Glues

Specifications

Grade	Commercial
Appearance	Water like
*Formaldehyde content	36.8 - 38.6 % (w/w)
*Methanol content	2.5 - 10 % (w/w)
Density	1.032-1.11 g/cc at 25 °C
Acidity as Formic Acid	0.005 - 0.03 % (w/w)
Ash content (max.)	2 % by wt.



Packing: 30 liters is packed in plastic can, 200 liters in GI drum while bulk quantities are packed in SS tanker.

* Formaldehyde concentrations 36.5 – 38.5 % with 3 – 11 % Methanol contents are produced on request

Urea Formaldehyde Concentrate 85% - UFC 85

Applications

Used as anti Urea (granular) manufacturing process. Also suitable for manufacturing U.F Glue.

Specifications

Appearance	Water like
Viscosity	250 – 600 cps at 25°C
Density	1.310 – 1.330 g/cc at 25°C
pH	8.0 – 9.0 at 25°C
Formaldehyde	60 ± 2 % by weight
Urea	25 ± 1 % by weight
Water	15 ± 1.0 % by weight
Shelf life	6 months at 25°C



Packing: 60 liters in plastic can and bulk quantities in SS tanker.

Urea Formaldehyde Concentrate 63% - UFC 63

Applications

Used in the manufacturing of Moulding Compounds. Also suitable for manufacturing U.F. Glue.

Specifications

Appearance	Water like
Viscosity	10 – 20 cps at 25°C
Density	1.200 – 1.250 g/cc at 25°C
pH	7.0 - 8.0 at 25°C
Formaldehyde	45 ± 1 % by weight
Urea	18 ± 1 % by weight
Water	37 ± 1.0 % by weight
Shelf life	6 months at 25°C

Packing: 60 liters packed in plastic can while bulk quantities are packed in SS tanker.

Phenol formaldehyde resins

Commercial Explosives and Industrial Chemicals

Chemicals (Polymers)

Phenol Formaldehyde (RESOLE) – KN 400

Application

Suitable for coating the Rock Wool.

Specifications

Appearance	Reddish Brown liquid
Viscosity	10 - 25 cps at 25°C
Density	1.10 – 1.2 g/cc at 25°C
pH	7.5 - 8.5 at 25°C
Shelf life	15 days at 25°C
Packing:	60 liters in plastic can, 200 liters in GI drum & bulk quantities in SS tanker.

Phenol Formaldehyde (RESOLE) – KN 300

Application

Suitable for the production of water proof Plywood.

Specifications

Appearance	Maroon Red liquid
Viscosity	200 – 400 cps at 25°C
Density	1.10 – 1.2 g/cc at 25°C
pH	12.0 – 13.5 at 25°C
Solid Content	43 ± 2 % by wt.
Shelf life	Two months at 25°C

Packing : 60 liters in plastic can, 200 liters in steel drum & bulk quantities in MS tanker.

Phenol Formaldehyde (RESOLE) – KN 900

Application

Suitable for coating of abrasive in the manufacturing of Cutting / Grinding Disc

Specifications

Grade	Abrasive binder
Viscosity	200 – 400 cps at 25°C
Density	1.19– 1.23 g/cc at 25°C
pH	8.0 – 8.5 at 25°C
Solid Content	70 - 80 % by wt.
Shelf life	Two months at 25°C

Packing : 60 liters in plastic can.

Phenol Formaldehyde (RESOLE) – KN 750

Application

Used as Cold-setting foundry sand (Silica/Quartz) binder for the production of Moulds and Cores.

Specifications

Grade	Foundry
Viscosity	200 - 400 cps at 25°C
Density	1.17 – 1.22 g/cc at 25°C
pH	12.0 - 14 at 25°C
Solid Contents	50 ± 2 % by wt.

Packing: 60 liters packed in plastic can & 200 liters in steel drum

Resin products

Commercial Explosives and Industrial Chemicals

Chemicals (Polymers)

Phenolic Resin (NOVOLAC) – KF 800

Application

Suitable for coating silica sand in the hot sand coating process

Specifications

Appearance	Granules
Softening point	90 ± 10 °C
Moisture (max.)	1.0 % by wt.
Ash	1.0 ± 0.2 % by wt.
Shelf life	Six months at 25°C

Packing: 50 kg in polypropylene bag

Foundry Resin (NOVOLAC) – FN 700

Applications

Used in the manufacturing of tundish board and ingot mould hot tops and in corning shell moulding process.

Specifications

Appearance	Powder (85% 200 mesh)
Nitrogen	3.8 – 4.0 % by wt
Moisture contents	0.5 – 0.9 %
Ash contents	0.8 – 1.2 % at 950°C
Shelf life	One year at 25°C

Packing: 50 kg in polypropylene bag

Lamp Capping Cement – LCC 760

Application

Suitable for bonding cap and glass portion in bulb manufacturing process

Specifications

Appearance	Fine powder
Bulk Density	0.7 - 0.95 g/cc
PH (in ethanol)	6.5 - 7.1
Curing time	180 sec at 350°C
Torque strength of bonded cap after curing	5 - 7 kg
Shelf life	One year at 25°C

Packing: 25 kg is packed in a cardboard box.

Urea Formaldehyde – KR 3000

Application

Used as abrasive binder in the manufacturing of Sand Paper.

Specifications

Appearance	Opaque
Viscosity	2000 – 4000 cps at 25°C
Density	1.290 – 1.310 g/cc at 25°C
pH	8.0 ± 0.5 at 25°C
Free formaldehyde	1.5 – 2.0 %
Gel. time	30 – 40 sec at 100°C
Solid content	65 ± 1 %
Shelf life	Two months at 25°C

Packing : 30 and 60 liters in cans and 200 liters in GI drum.

Lamp cement

Commercial Explosives and Industrial Chemicals Chemicals (Polymers)

Phenolic Resin (Novolac) – FN 600

Applications

Used in the manufacturing of Cutting/Grinding disc

Specifications

Appearance	Powder (90% 250 mesh)
Softening point	100 ± 10°C
Moisture content	0.5 – 0.9%
Ash content	0.8 – 1.2 % at 950°C
Shelf life	Six months at 25°C

Packing : 15 kg are packed in a cardboard box.

Urea Formaldehyde-KR 60

Application

Suitable for the production of ordinary plywood/Chipboard.

Appearance	Opaque
Viscosity	200-300 cps at 25°C
Density	1.252-1.262 g/cc at 25°C
pH	8.0-8.5 at 25°C
Free formaldehyde	Below 1%
Gel. time	40 – 60 sec at 100°C
Solid content	60 ± 1%
Shelf life	Two months at 25°C

Packing : 30 liters in plastic can, 200 liters in steel drum & bulk quantities in MS tanker.

Urea Formaldehyde-KR 50

Application

Suitable for the production of Chipboard.

Appearance	Opaque
Viscosity	40-80 cps at 25°C
Density	1.200-1.250 g/cc at 25°C
pH	8.0-8.5 at 25°C
Free formaldehyde	Below 5%
Gel. time	50 – 70 sec at 100°C
Solid content	50 ± 1%
Shelf life	Two months at 25°C

Packing : 30 liters in plastic can, 200 liters in steel drum & bulk quantities in MS tanker.

Acetic acid

Commercial Explosives and Industrial Chemicals

Chemicals (Polymers)

Lamp Capping Cement – LCC 770

Application

Suitable for coupling caps with tube rods.

Specifications

Appearance	Fine powder
Bulk Density	0.70 – 0.95 g/cc
pH (in ethanol)	6.5 – 7.1
Curing time	180 sec at 350 °C
Torque strength of bonded cap after curing	5 – 7 kg
Shelf life	One year at 25°C

Packing: 25 kg in a cardboard box.

Urea Formaldehyde – KR 60

Application

Suitable for the production of ordinary Plywood/Chipboard.

Specifications

Appearance	Opaque
Viscosity	200 – 300 cps at 25°C
Density	1.252 – 1.262 g/cc at 25°C
pH	8.0 – 8.5 at 25°C
Free formaldehyde	Below 1 %
Gel. time	40 – 60 sec at 100°C
Solid content	60 ± 1 %
Shelf life	Two months at 25°C

Packing: 30 liters is packed in plastic can and 200 liters in steel drum while bulk quantities are packed in MS tanker.

Urea Formaldehyde – KR 50

Application

Suitable for the production of Chipboard.

Specifications

Appearance	Opaque
Viscosity	40 – 80 cps at 25°C
Density	1.200 – 1.220 g/cc at 25°C
pH	8.0 – 8.5 at 25°C
Free formaldehyde	Below 1 %
Gel. time	50 – 70 sec at 100°C
Solid content	50 ± 1 %
Shelf life	Two months at 25°C

Packing: 30 liters is packed in plastic can and 200 liters in steel drum while bulk quantities are packed in MS tanker.

Industrial chemical products

Commercial Explosives and Industrial Chemicals

Chemicals

Glacial Acetic Acid

Acetic Acid is a clear and colourless liquid having pungent and vinegary odour with burning taste. Major uses of Acetic Acid are in the manufacturing of cellulose acetate Fiber, PTA, ester solvents, dyes, metal salts and many other chemicals. Its user industries are Textile, Leather, Food, Pharmaceuticals, Plastic and Rubber.

Technical Data

Content	≥ 99.5% (weight %)
Freezing point	15.5°C
Density at 20°C	1.042 gm/ml
Methanoic acid	0.35%
Acetaldehyde	0.10%
Heavy metal (as pb)	0.0004%
Evaporation residue	0.02%
Content of iron	0.0002%
Time of oxidation of potassium permanganate	5 minutes



Packing: 30 kg in plastic cans and bulk quantities in tankers

Ethyl Acetate

Ethyl Acetate is a stable, colourless and inflammable liquid with a pleasant odour. It is used widely in formulating gravour, printing inks, adhesives and lacquers. It is used extensively as a cellulose nitrate solvent in the Manufacturing of products such as artificial and patent leathers, inks, cement, photographic films and linoleum. Ethyl Acetate is also used in the formulation of products like candy glaze, cleaning fluids, flavours and spirit varnishes. .

Technical Data

Content	≥ 99.5% (weight %)
Density	0.878 – 0.883 gm/ml
Moisture	0.20%
Acidity (as CH ₃ COOH)	0.005%
Evaporation residue	0.005%



Packing: 180 kg in steel drums and bulk quantities in tankers

Butyl Acetate

Butyl Acetate is a colourless inflammable liquid with a pleasant and fruity odour. It is widely used in cellulose nitrate lacquers. It is also an active solvent for cellulose acetate butyrate, ethyl cellulose chlorinated rubber, polystyrene, methacrylate resins, natural gums and paints. This ester is also used as a solvent in the preparation of artificial leather, textile and plastics and as an extraction solvent in processing various oils and pharmaceuticals.

Technical Data

Content	≥ 99.5% (weight %)
Density	0.897-0.902 gm/ml
Moisture	≤ 0.20%
Acidity (as CH ₃ COOH)	≤ 0.005 %
Evaporation residue	≤ 0.005%

Packing: 180 kg in steel drums and bulk quantities in tankers.

07

SOLDIER SYSTEMS

Soldier Systems & Personal Equipment

Uniforms, footwear, field clothing, insignia, load carriage, protective equipment, ceremonial items and barracks support products.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

47 named products or source sheets

SECTION STRUCTURE

Uniform foundations / Footwear & field clothing / Insignia, identity & headwear / Load carriage & field equipment / Ceremonial, barracks & protection

Soldier Systems & Personal Equipment

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Soldier Systems & Personal Equipment

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SECTION SCOPE

Uniforms, footwear, field clothing, insignia, load carriage, protective equipment, ceremonial items and barracks support products.

ISDELA PORTFOLIO

5 INDEXED CAPABILITIES

CLICK ANY CARD TO OPEN

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Uniform shirt

UNIFORM

Made from a blend of cotton and polyester for durability and comfort

Uniform Shirt

Four Pocketed i.e 2 at front and one side pocket on each arm Side.

- Place for Name tags and company name at front.
- Place for Company Sign at Sides.
- Shoulders for Epulettes.



Uniform trousers

UNIFORM TROUSER

- Six Pocket trouser.
- Comfortable.



Custom uniform colours

CUSTOMIZED COLOUR FOR UNIFORM

1. Dark Blue
2. Light Blue
3. Black
4. Grey



All-terrain military boots - black

ALL TERRAIN MILITARY BOOTS (BLACK)

- Characterized by their ruggedness, durability, and protective features, including reinforced soles, high-quality materials like leather and ballistic nylon, and added support for ankles and feet.
- Also designed to be comfortable over long periods,
- waterproof, and provide good traction on various terrains.



All-terrain military boots - brown

ALL TERRAIN MILITARY BOOTS(BROWN)

- Characterized by their ruggedness, durability, and utilitarian design.
- Featuring a lace-up front, mid-calf height, and chunky, high-traction soles.
- Made from materials like full-grain or suede leather for protection and water resistance, and
- The brown colour can vary from a deep, distressed shade to a lighter, more casual tan.



White training shoes

WHITE JOGGERS

- A premium synthetic or original leather upper, a comfortable PU (Polyurethane) sole for support and traction, and a cushioned insole.
- Designed for both casual and active use, including jogging and running.
- Emphasize a balance of style, comfort, and performance.



Military / army socks

MILITARY / ARMY SOCKS

Our military socks have unique padding specifically engineered for field training and combat conditions, clinically shown to reduce blisters, pain, pressures and moisture.



Customized Color Availability
Brown and Green.



Military training socks - white

MILITARY TRAINING SOCKS (WHITE)

Our White single and double stripped military socks have unique padding specifically engineered for field training and combat conditions, clinically shown to reduce blisters, pain, pressures and moisture.



Moderate-cushion anti-fatigue socks

MODERATE CUSHION OVER-CALF ANTI-FATIGUE MILITARY SOCKS

- Our Black military socks have unique padding specifically engineered for field training and combat conditions, clinically shown to reduce blisters, pain, pressures and moisture.
- Especially featured for the All Terrain Boots .
- Prevent Sweating of the feet.
- Keep the feet fungus free.



Heavy-duty nylon military belt

HEAVY DUTY MILITARY BELT (NYLON)

a rugged and durable nylon material with a quick release buckle. This belt has twenty pairs of eyelets allowing it to be fully customizable for carrying various items and equipment.



Customized Color Availability
Black, Brown, Green

Sleeping suit

SLEEPING SUIT

- Characterized by comfort, a loose fit for freedom of movement, and breathable, season-appropriate fabrics.
- Two-piece cotton and linen blended sets (pajamas) with a top (short or long-sleeve, often with a button-down front or T-shirt style) and matching pants or shorts.

Customized Color Availability

Light Blue, Grey, Black or any colour as per Requirement



Tactical raincoat

TACTICAL RAIN COAT

- front closure with buttons on the left side;
- buttoned cuffs;
- rain protection on chest and shoulders.

Material: 100% Rayon with waterproof treatment (rubberized material).

Customized Color Availability

Brown, Green or Blue.



Summer round-neck military T-shirt

MILITARY ROUND NECK T SHIRT TO WEAR SUMMERS

- Round neck T shirt is made from cotton- polyester blend for summers
- With Customised Printed Company logon on the chest.
- Offer a Comfortable and Sweat free experience.
- Can be worn on the simple uniform trouser in summers subtracting the uniform upper to fight the heat.

Customized Color Avaialibity
Black, Brown, Blue, Green.



Winter tactical camouflage jacket

MILITARY CAMO JACKET, WINTER TACTICAL OUTERWEAR

Full Zip,
Hooded, Pockets,
Soft Shell,
Thermal, Water Resistant, Weathergear,
Wind-Resistant

Customized Color Availability
Black, Brown, Blue, Green.



Military beret

MILITARY BERET

- Crafted from high-quality wool and leather, these berets offer durability and comfort, ensuring a stylish yet practical accessory for both men and women.
- Available in multiple colors, these army berets cater to diverse fashion preferences, making them suitable for various occasions, from casual outings to formal events.



Customized Color Availability

Black, Brown, Blue, Green, Red, Maroon.

Embroidered beret insignia

EMBROIDER BERET INSIGNIA

- **Material and Texture:** It's made of thread stitched onto a fabric backing, giving it a raised, tactile surface, which is a key differentiator from printed designs.
- **Stitching:** Stitches used (e.g., satin stitches for borders and bold details, fill stitches for large areas) and the overall stitch count, which contributes to its durability and premium feel.
- **Size and Shape:** can be stitched to any dimensions and overall shape (e.g., circular, shield-shaped, or custom-cut).
- **Threads** : Special Nylon, skill best quality threads are used.



Customized Color Availability
As per Design

Metal company / regiment beret insignia

METAL COMPANY/ REGIMENT BERET INSIGNIA

- Metal Insignia for the beret to give the professional look to the Soldier.
- Carved with care accuracy and focus according to the logo of the Company or regiment.
- Can be customized to any Shape according to the company Emblem.



Customized Color Availability
As per Design

Name tags

NAME TAGS

- A small patch or label made of fabric where your name (or text) is sewn through needle work with threads, not printed.

Customized Color Availability
As per Design



Track suits

TRACK SUITS

- Made from different cloth stuff as per customer's demand like Polyester (durable, moisture-wicking), Nylon (lightweight, quick-drying), and blends with Spandex/Lycra (stretch, flexibility), but also natural fibers like Cotton (breathable, soft).
- Can be customized with company Insignia at the chest and Company Name at the back.

Customized Color Availability
Can be Customized to any colours.



Woollen jersey

WOOLLEN JERSEY

- **Material Composition:** Made off 80/20 wool-synthetic fiber (like mixed fibers or nylon) blend to enhance durability and shape retention.
- **Durability and Reinforcement:** Built to withstand rigorous use, reinforced patches on the shoulders and elbows to prevent wear and tear in high-friction areas.
- **Insulation and Breathability:** The thick, often ribbed, wool fabric provides excellent insulation in cold weather while still allowing moisture (sweat) to escape, which helps keep the wearer dry and comfortable.
- **Available in Round-Neck and V-Neck.**

Customized Color Avaialibity

Black, Green, Brown, Blue



Winter uniform inner shirt

WINTER UNIFORM INNER FULL SLEEVE SHIRT

- **Moisture Management:** Transport sweat away from the skin quickly to prevent skin wetness, which can lead to discomfort or injury in extreme cold.
- **Breathability:** Designed to be highly air permeable to facilitate the dissipation of heat and moisture from the body, crucial for soldiers engaging in high levels of physical activity.
- **Thermal Regulation:** Contribute to the overall clothing system's ability to maintain the wearer's thermal balance in extreme environments.



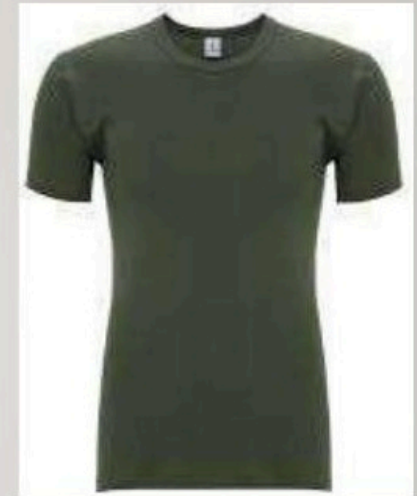
Customized Color Availability

Black, Green, Brown, Blue

Summer uniform inner shirt

SUMMER UNIFORM INNER ROUND NECK

- Provide **comfort, breathability, and durability** in hot weather.
- Fabrics used is cotton-polyester blend that ensures the sufficient airflow and comfort in extreme heat.



Customized Color Availability

Black, Green, Brown, Blue

Summer collar T-shirt

SUMMER COLLART SHIRT

- Made from cotton- polyester blend for summers
- With Customised Printed Company logon on the chest.
- Offer a Comfortable and Sweat free experience.
- Can be worn on the simple uniform trouser in summers subtracting the uniform upper to fight the heat.

Customized Color Avaialibity

Can be customized to any color as per given design.



Military reflector vest

MILITARY REFLECTOR VEST

- Waterproof, LED FLASH, High Visibility
- Customized support
 - Customized Logo of the company at chest and back.

Customized Color Availability
Yellow , Orange



Durable tactical military gloves

TACTICAL DURABLE MILITARY GLOVES

Specialized gear designed to offer a balance of protection, durability, dexterity, and functionality in demanding environments.

- **Protection:** Protect hands from a wide range of hazards, including cuts, abrasions, burns, and impacts.
- **Reinforced Palms:** Extra layers of leather or synthetic materials in the palm area increase abrasion resistance and grip.
- **Knuckle Guards:** Hard shells (like carbon fiber) or softer rubber/neoprene inserts protect knuckles and fingers from impact injuries.
- **Specialized Liners:** Materials like Kevlar or Aramid provide high levels of cut and slash resistance for high-risk situations (e.g., bomb disposal or handling sharp objects).
- **Flame Resistance:** Materials such as Nomex are used in specific models, vital for environments with heat or fire risks (e.g., aviation or firefighting).

Customized Color Availability

Black, Green, Brown, Blue.



Woollen gloves

WOOLLEN GLOVES

- Made from a blend of 70% wool and 30% Nylon.
- Provide Superior insulation, durability, and moisture management, ensuring warmth and dexterity in cold and damp conditions.



Customized Color Availability

Black, Green, Brown, Blue

Woollen military headgear

WOOLLEN MILITARY HEAD GEAR/ CAP

- Made from a blend of 70% wool and 30% Nylon.
- Provide Superior insulation, durability, and moisture management, ensuring warmth and dexterity in cold and damp conditions.

Customized Color Availability

Black, Green, Brown, Blue



Military P-cap

P- CAP

- Constructed from strong, modern, and tear-resistant materials like polyester, nylon, and cotton blends designed to withstand harsh field conditions.

- **Made** of Same Material, Can be customized by embroidering Company Insignia at front to make it look better.



Customized Color Availability
Can be customized as per design or given color.



Military epaulettes

MILITARY EPAULETTES

- Ornamental shoulder pieces used to denote an individual's rank, branch of service, and organizational affiliation, primarily on uniforms.
- Embroidered on the cloth.



Military / company emblem

MILITARY/ COMPANY EMBLEM

- Shoulder and Chest Insignia's or Emblem.
 - Show the affiliation to special regiment, company or department.
 - **Material and Texture:** It's made of thread stitched onto a fabric backing, giving it a raised, tactile surface, which is a key differentiator from printed designs.
 - **Stitching:** Stitches used (e.g., satin stitches for borders and bold details, fill stitches for large areas) and the overall stitch count, which contributes to its durability and premium feel.
 - **Size and Shape:** can be stitched to any dimensions and overall shape (e.g., circular, shield-shaped, or custom-cut).
 - **Threads :** Special Nylon, skill best quality threads are used.
- Customized Color Availability**
Can be customized as per design or given color.



Woollen scarf

WOOLLEN SCARF

- Made from a blend of **70% wool** and **30% Nylon**.
- Provide Superior **insulation**, **durability**, and **moisture management**, ensuring warmth and dexterity in cold and damp conditions.

Customized Color Availability

Black, Green, Brown, Blue



Military neck gaiter

MILITARY NECK GAITER

Characterized by durability, versatility, and performance-oriented materials designed to provide protection and comfort in a wide range of operational environments.

- Typically made from technical fabrics such as 100% polyester microfiber, polypropylene, or performance fleece (like Polartec).
- A single gaiter can be worn in numerous ways, including as a neck warmer, face mask, balaclava, hood, headband, or beanie.

Customized Color Availability

Black, Green, Brown, Blue



Military boonie hat

MILITARY BOONIE HAT

The military boonie hat is a rugged, wide-brimmed sun hat with functional features designed for use in hot, humid, or otherwise demanding field environments.

- Provides excellent 360-degree shade coverage for the face and neck, protecting from sun, rain, and insects.
- Made from a durable, abrasion-resistant material, such as a 50/50 nylon-cotton rip-stop blend, that can withstand harsh conditions

Customized Color Availability

Black, Green, Brown, Blue or any selected colour.



Multipurpose tactical vest

MULTIPURPOSE MILITARY TACTICAL VEST

- Made from rugged materials like **Cordura, nylon, or polyester** to withstand harsh use.
- Designed to be water-resistant for protection in adverse weather.
- Features a **Modular Lightweight Load-carrying Equipment (MOLLE)** system with webbing for attaching various pouches and accessories.
- Provides multiple pockets and pouches for organized storage of essential gear.
- Allows for quick and easy access to equipment, even in limited visibility or high-stress situations.

Customized Color Availability
As per requirement



Small tactical backpacks

SMALL TACTICAL BAG PACKS

Military tactical small backpacks, often known as assault packs or daypacks, are engineered to support short missions or everyday carry (EDC)

- Made from rugged materials like Cordura, nylon, or polyester to withstand harsh use.
- Designed to be water-resistant for protection in adverse weather.
- Features a **Modular Lightweight Load-carrying Equipment (MOLLE)** system with webbing for attaching various pouches and accessories.

Customized Color Availability
As per requirement



Large camouflage tactical pack

CAMO TACTICAL BIG PACK

A load-bearing bag with a reinforced frame, heavy-duty fabrics, and modular attachment points, designed to carry 20–80+ liters of gear securely over long distances and rough terrain.

- Made from rugged materials like Cordura, nylon, or polyester to withstand harsh use.
- Designed to be water-resistant for protection in adverse weather.
- Features a **Modular Lightweight Load-carrying Equipment (MOLLE) system** with webbing for attaching various pouches and accessories.
- Size 50 -60 L.
- Come with mulyi purpose pouches.

Customized Color Avaialibity
As per requirement



Tactical pouches

TACTICAL POUCHES

Tactical pouches are essential for keeping your gear organized and easily accessible in the field.

- Made from rugged materials like **Cordura, nylon, or polyester** to withstand harsh use.
- Designed to be water-resistant for protection in adverse weather.

Can easily fit on the combat belt and includes:

1. **Magazine Pouch**
2. **Radio Pouch**
3. **Medical Pouch**
4. **Storage Pouch**
5. **Folding dump Pouch**
6. **Rifle Magazine Pouch**



Customized Color Availability
As per requirement

Oxford formal shoes

OXFORD FORMAL SHOES

Elegant Oxford Pure Leather Shoes For Formal gathering such as Dinners, Ceremonies and for Indoor Security Purpose.



Sleeping bag

SLEEPING BAG

- Fantastic lightweight sleeping bag for
- warmer climates
- This patrol bag combines with the cold weather and bivy bags, making up a waterproof, extreme weather sleeping system.
- Great for anyone sleeping in temperatures
- down to -1 celsius



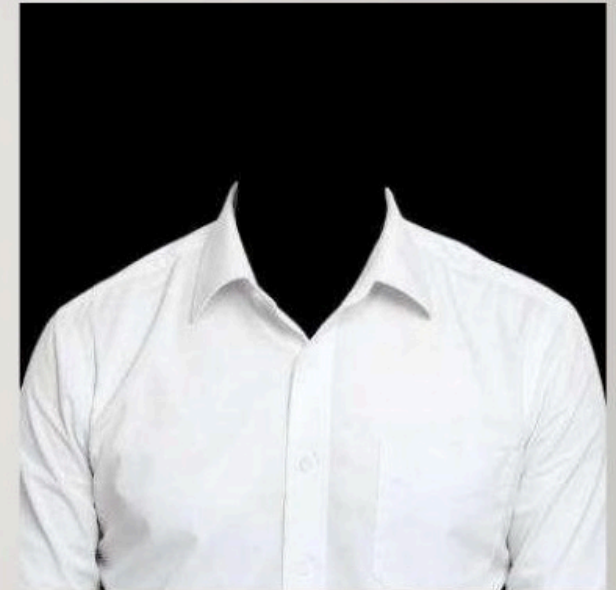
Formal white collar shirt

FORMAL WHITE COLLAR SHIRT

A white formal collar shirt is typically made from cotton.

Collars and cuffs: The collar is often constructed with a special interlining to give it structure and crispness.

When worn for the ceremonies give the elegant and asthetic look and add to the grace of the men.



Regimental / company tie

REGIMENTAL / COMPANY TIE

- Made with the blend of natural fibers like silk, wool, cotton, and linen, as well as synthetic fibers like polyester to give it an elegant look.
- Company Monogram is Printed along the tie to give professional look.

Customized Color Availability
As per requirement



Tiepin and cufflinks

REGIMENTAL/ COMPANY INSIGNIA TIEPIN AND CUFF LINKS

Made up of base metals like copper, brass, or steel are common for more affordable or everyday options.

Company Insignia is holds the main Position..



Barrack bedding

BARRACK BEDDING

- A single cotton bedsheet is typically soft, breathable, and comfortable, making it suitable for year-round use and easy to maintain through machine washing

- **Standard dimensions:** Single bedsheets typically measure around 60x90 inches

- Sheets are made from 100% pure cotton for maximum comfort

Customized Color Availability
As per requirement



Soft white bath towel

SOFT WHITE BATH TOWEL

- High-quality white towels are made from absorbent materials like cotton, with a higher GSM indicating greater plushness and absorbency.
- Can be washed with bleach, making it easier to achieve a thorough, hygienic clean.
- Size 27"× 52"



Formal trousers

FORMAL PANTS

Made of 70% polyester and 30% rayon,
which makes them very comfortable to
wear.

Customized Color Availability
As per requirement



Bullet-resistant jacket without plates

BULLET PROOF JACKET WITHOUT PLATES

Customized Color Availability

Black,Brown



Simple hand towel

SIMPLE HAND TOWEL

- Good For Cleaning of hands in field and cleaning of Sweat.
- Small size 12x12"
- Easy to fit
- Easy to carry.

Customized Color Availability
As per requirement



08

PROGRAMME SERVICES

Programme Services & Governance

Requirement formation, capability alignment, institutional liaison, controlled proposal support, delivery governance, acceptance and sustainment coordination.

PORTFOLIO LEAD

ISDELA

PORTFOLIO COVERAGE

3 named products or source sheets

SECTION STRUCTURE

Programme lifecycle / Catalogue governance / Publication control

Programme Services & Governance

Index 1 of 1 / select any entry to open it

SECTION SCOPE Requirement formation, capability alignment, institutional liaison, controlled proposal support, delivery governance, acceptance and sustainment coordination.	ISDELA PORTFOLIO 3 INDEXED CAPABILITIES CLICK ANY CARD TO OPEN
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CATALOGUE GOVERNANCE Portfolio governance and reconciliation 265	
PUBLICATION CONTROL ISDELA publication control 266	

Programme lifecycle support

01

REQUIREMENT DEFINITION

Translate operational needs into a controlled, programme-ready requirement baseline.

02

CAPABILITY ALIGNMENT

Identify suitable Pakistani capability owners and establish authoritative technical engagement.

03

GOVERNMENT AND INSTITUTIONAL LIAISON

Coordinate formal communication, meetings, approvals and records across authorised stakeholders.

04

PROPOSAL AND CONTRACTING SUPPORT

Manage compliant documentation, commercial alignment and controlled submission workflows.

05

DELIVERY, TRAINING AND ACCEPTANCE

Coordinate schedule, training, acceptance evidence and configuration records.

06

SUSTAINMENT AND MRO

Structure spares, maintenance, technical support and through-life programme governance.

Portfolio governance and reconciliation

The portfolio has been reconciled against controlled technical records. Named current products appear once; unsupported, duplicated or superseded claims are deliberately excluded.

01

Barq/Burq was normalised to the current ISDELA title BURQ; Baktar Shikan, Anza Mk III, Fatah-I and Fatah-II use their current named portfolio records.

02

Generic labels such as scout UAVs, jammers, night vision, armoured vehicles, mortars and commercial explosives were replaced by the named products and source sheets now present.

03

Legacy or developmental names not supported by a current approved technical record are not presented as currently export-ready products.

04

Customer configuration, export status, price, delivery and end-user eligibility must be reconfirmed with the relevant capability owner and competent Government of Pakistan authority.

Accuracy takes priority over inflated claims. Calling an unsupported or superseded name available for export would be commercially reckless.

ISDELA publication control

ISDELA PORTFOLIO CONTROL	Controlled master catalogue and approved capability records
ISDELA TECHNICAL REVIEW	Product descriptions and public specifications normalised for consistent presentation
ISDELA CONFIGURATION CONTROL	Final configuration confirmed against the authorised customer requirement
ISDELA COMMERCIAL CONTROL	Pricing, delivery and validity issued only through a controlled proposal
ISDELA EXPORT COMPLIANCE	Availability remains subject to applicable approvals and end-use requirements
ISDELA DOCUMENT CONTROL	Revision status, traceability and release records maintained internally

ISDELA RELEASE CONTROL

01

CONTENT VERIFIED

Technical content checked and normalised

02

CONFIGURATION CHECK

Customer scope and assumptions confirmed

03

AUTHORISED ISSUE

Controlled release and revision recorded

ISDELA - CONNECTING CAPABILITY. ADVANCING READINESS.