



MUSANNA
TECHNICAL (PRIVATE) LIMITED

LOCALLY BUILT
GLOBALLY TRUSTED



A15 - NASTP
OLD AIRPORT ROAD
RAWALPINDI - PUNJAB
PAKISTAN 46000

+92 (51) 6134 030
+92 319 9949 042
info@musannatech.com
www.musannatech.com



COMPANY PROFILE 20
26

POWERED BY:
E.M.E

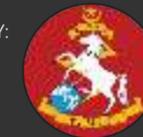


TABLE OF CONTENTS

+ ABOUT US	02
+ LEADERSHIP AND MANAGEMENT	05
+ CORE BUSINESS DIVISIONS	09
+ INFRASTRUCTURE AND CAPABILITIES	21
+ RESEARCH AND DEVELOPMENT	23
+ CERTIFICATIONS AND ACCREDITATIONS	27
+ SUSTAINABILITY	29
+ CAREER AND CULTURE	30
+ WHY CHOOSE MUSANNA?	31



MUSANNA
TECHNICAL (PRIVATE) LIMITED



77+
YEARS OF
LEGACY



50K+
SKILLED
PROFESSIONALS



ISO
COMPLIANT
FACILITIES



ABOUT MUSANNA

Musanna Technical (Pvt) Limited, based in Rawalpindi, Pakistan, a subsidiary of a holding company by the name of Musanna Logistics and Technical (Pvt) Ltd. is a multi-disciplinary engineering and manufacturing company delivering solutions across defense, industrial, infrastructure, and mobility sectors. Drawing expertise from the Corps of Electrical and Mechanical Engineers (EME), Musanna is built on a legacy of innovation, advanced manufacturing, and technical consultancy.

Established in September 2024 as the Front Office of the Corps of EME, the company operates as a fully registered and compliant engineering solutions provider. With a strong commitment to innovation, technical excellence, and strategic partnerships, Musanna advances national capabilities while ensuring value, operational continuity, and future readiness for public and private sector clients.



LOCALLY BUILT GLOBALLY TRUSTED

OUR VISION

To lead regional and global engineering by transforming complex challenges into smart, sustainable, and mission-ready solutions that drive technological advancement and industrial excellence from Pakistan to the world.

OUR MISSION

To design, engineer, and deliver innovative, high-performance solutions across defense, industrial, healthcare, infrastructure, and mobility sectors, empowering clients with precision manufacturing, cutting-edge technology and promising quality, backed by global certifications and local expertise.

REGISTRATIONS:

- Securities and Exchange Commission of Pakistan (**SECP**)
- Federal Board of Revenue (**FBR**)
- Pakistan Single Window (**PSW**)
- Directorate General Defence Purchase (**DGDP**)
- Rawalpindi Chamber of Commerce and Industry (**RCCI**)
- Pakistan Engineering Council(**PEC**)

CONSULTANTS:

- SR LAW - Legal
- HAQ Consultants – Taxation and Accounting
- REAMARC.IO – Branding and Marketing



PRECISION ENGINEERING & TECHNICAL SOLUTIONS

Innovating mission-ready solutions for resilience, sustainability and global excellence.

Core Divisions:

- Maintenance, Repair and Overhaul
- Indigenous Manufacturing
- Design & Simulation
- HR Consultancy



CHAIRMAN'S MESSAGE

At Musanna, our journey has been guided by a vision to build with purpose, lead with integrity, and innovate with impact. From early projects to today's complex endeavors, we have remained committed to engineering excellence, uncompromising quality, and partnerships built on trust. In an evolving world, adaptability, accountability, and collaboration define our approach, while our dedicated team ensures every project is delivered with precision and care. Looking ahead, we are focused on sustainable growth, expanding capabilities, and contributing meaningfully to the communities we serve.

A handwritten signature in white ink, appearing to read "Atique Ahmed".

ATIQUE AHMED
CHAIRMAN



CEO'S MESSAGE

We ensure at Musanna, our commitment goes beyond delivering projects. We deliver trust, precision, and sustainable value. Every milestone reflects our team's expertise, client-focused approach, and dedication to quality. In a sector where detail and timely execution are critical, we have built a culture of accountability, continuous improvement, and innovation. From planning to handover, every step is guided by integrity and professionalism. Looking ahead, with strong leadership, streamlined operations, and a forward-focused mindset, Musanna is well-positioned to meet tomorrow's challenges and create lasting impact.

HASNAT AHMED QURESHI
CHIEF EXECUTIVE OFFICER

CORE VALUES



PATRIOTISM

We are committed to strengthening Pakistan's industrial and defense capabilities through homegrown innovation and self-reliance.



INNOVATION

We embrace cutting-edge technology and creative engineering to deliver forward-thinking solutions that meet the evolving needs of defense, industry, and society.



EXCELLENCE

We strive for excellence in all aspects of our operations guided by international certifications and a relentless pursuit of improvement, innovation, collaboration, and sustainability.



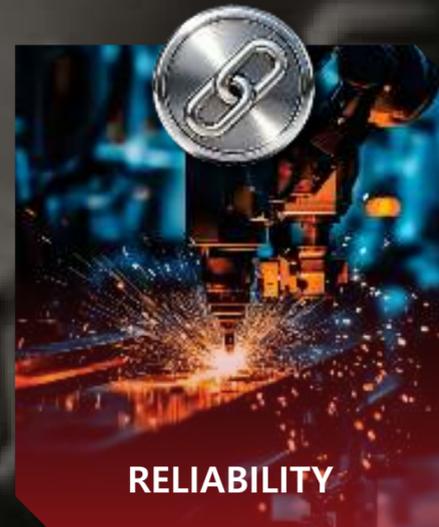
AGILITY

It's about adapting swiftly, responding with precision, and delivering results without compromise. By anticipating change and engineering smarter solutions, we ensure mission readiness in every challenge.



INTEGRITY

We conduct our business with honesty, transparency, accountability, fairness, and respect, earning the trust of clients, partners, and communities.



RELIABILITY

Built to perform under pressure, our products and services are engineered for durability, consistency, and mission-critical environments.

CORE BUSINESS DIVISIONS

01 MRO SUPPORT (MAINTENANCE, REPAIR & OVERHAUL)

02 INDIGENOUS MANUFACTURING

03 DESIGN & SIMULATION

04 HUMAN RESOURCE CONSULTANCY

MRO SUPPORT (MAINTENANCE, REPAIR & OVERHAUL)

Musanna is at the forefront of defense equipment maintenance and modernization, delivering comprehensive overhaul solutions that meet the stringent requirements of military operations. Through technical precision and battlefield-tested practices, we restore every system to optimal operational readiness, ensuring peak performance, reliability, and mission-readiness.

Our Maintenance, Repair, and Overhaul (MRO) capabilities cover a wide spectrum of advanced defense platforms, including:

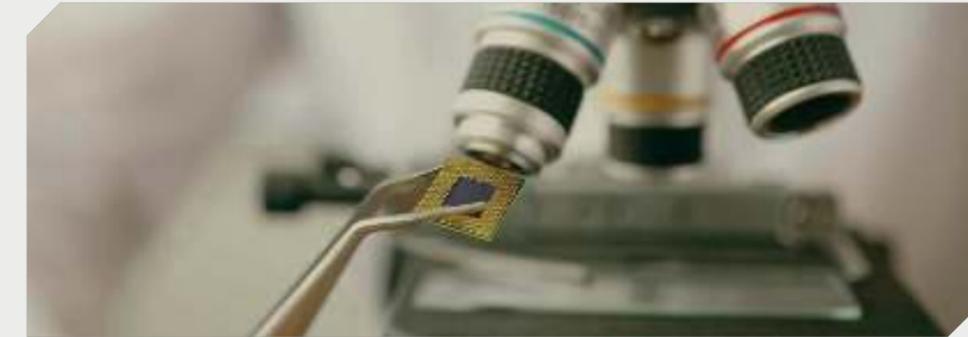
- **Armored Fighting Vehicles (AFVs)**
- **Jeeps & Trucks**
- **Artillery & Small Arms**
- **Communication & Security Equipment**
- **Radar Systems**
- **Jammers & Electronic Warfare Systems**
- **Vehicle Platforms & Mobility Systems**
- **Anti-Tank Weapon Systems**
- **Air Defense Systems**

Through our **Life-Cycle Sustainance Support (LCSS)** programs, we extend service life and maintain surveillance capabilities, often independent of OEM support, ensuring both operational readiness and cost efficiency.



ELECTROMEDICAL EQUIPMENT AND SUPPORT SERVICES

- Calibration and repair of electromedical equipment
- Technical support for 50+ hospitals and 26,000+ medical devices



MATERIAL TESTING AND CALIBRATION LABORATORY

- Metallurgical Microscope
- Surface Roughness Tester
- Spectrometer
- Flaw Detector
- Universal Testing Machine

SUPPORTING FACILITIES AND TECHNOLOGY

- CNC Machining and Custom Fabrication Workshops
- 3D Scanning and Re-Engineering Stations
- Universal Testing Machine (Stress Analysis)
- Laser Cutting and Precision Welding Systems
- Viscometry, Surface Testing and Environmental Calibration Tools



CORE BUSINESS DIVISIONS

01 MRO SUPPORT
(MAINTENANCE, REPAIR & OVERHAUL)

02 INDIGENOUS MANUFACTURING

03 DESIGN & SIMULATION

04 HUMAN RESOURCE CONSULTANCY

INDIGENOUS MANUFACTURING

Musanna Technical (Private) Limited develops Indigenous, high-performance solutions that power self-reliance and national capability.





ANTI DRONE SYSTEMS

- Man-portable and vehicle-mounted jammers
- RF-based detection and interference units
- Smart sensor and thermal surveillance kits
- Mobile diagnostic and situational awareness platforms
- Modular perimeter security units



ELECTRIC VEHICLES & CONVERSION KITS

- **Bolan EcoDrive** (10KW & 20KW): Converted commercial vans.
- **EcoCart**: 11-seater electric transport for group logistics.
- **EcoRide**: Compact electric bikes.
- **Administrative Cart**: Electric cargo cart for urban transport and last-mile delivery.



FIREFIGHTING AND UTILITY VEHICLES

- **Trailer Fire Pump (3000 L/min)**: For urban, industrial and field operations.
- **Water Bowser (4500L)**: Mobile water transport for field support, emergency logistics and remote firefighting.



MOBILE WORKSHOP

On-the-go maintenance and repair with rapid deployment, all-terrain mobility, and eco-efficient performance. Built on a 1.25-ton Land Rover Defender chassis, it provides mobility, durability, and adaptability for diverse environments.



TENDER FIRE CRASH

At Musanna, we manufacture state-of-the-art fire fighting vehicles built to deliver maximum safety and performance in emergency situations. Our TFC 4500 is designed for rapid response, reliability and durability.



MOBILE CONTAINER VEHICLES (MCVs)

Foldable, modular units for command and control, mobile clinics, emergency response, and temporary offices or labs. Engineered for rugged terrain and rapid deployment, MCVs integrate power, HVAC, data, and communication systems.



BAKED PAINT AND POWDER COATING FACILITY

Musanna offers advanced baked paint and powder-coating services ensuring durable, corrosion-resistant, and high-finish surface protection.



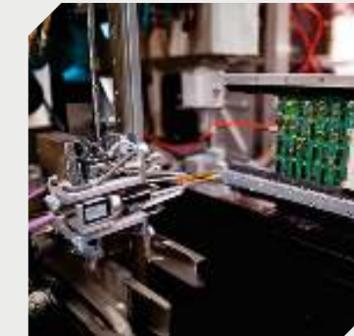
BULLETPROOFING—B6 LEVEL

Musanna provides partial and complete bullet-proofing solutions using high-grade armored plating engineered for reliable ballistic protection.



HVAC SYSTEMS MANUFACTURING

Musanna designs, installs, and maintains climate control systems for institutional, industrial, and mobile environments.



COMPONENT REBUILDING AND MANUFACTURING

Musanna strengthens indigenous capability by rebuilding, re-engineering, and producing mission-critical components.

INJECTOR NOZZLE KIT

Locally designed for EFI diesel engines, Musanna's Injector Nozzle Kit is a reliable, cost effective alternative to full injector replacement.



SPARE PARTS

Musanna provides indigenously developed spare parts, engineered for durability, precision, and compatibility - ensuring quick availability and reduced import dependence.

ARTISAN MANUFACTURING

Musanna blends craftsmanship with industrial capability to create customized artistic products, corporate gifts and décors.



CORE BUSINESS DIVISIONS

01 MRO SUPPORT
(MAINTENANCE, REPAIR & OVERHAUL)

02 INDIGENOUS MANUFACTURING

03 DESIGN & SIMULATION

04 HUMAN RESOURCE CONSULTANCY

DESIGN AND SIMULATION DIVISION

The Design and Simulation Division of Musanna Technical (Pvt) Ltd develops practical, technology driven solutions that combine digital precision with real-world application. Supported by the engineering expertise of the Corps of Electrical and Mechanical Engineering (EME), the division focuses on designing and producing simulators, test benches, diagnostic platforms, and AI-based systems aimed at improving training, testing, and operational efficiency across defense and industrial sectors.



SIMULATION AND TRAINING SYSTEMS

Develops simulators that replicate real-world environments for practical and cost-effective training.

KEY SYSTEMS:

- **VT-4 Tank Hardware-Integrated Driver Simulator (HIDS)**
- **ALCOTAN Weapon Simulator**
- **Anti-Tank Weapon Simulator**
- **Integrated Combat Simulator (ICS) for combined arms training**

Features include realistic terrains, performance monitoring, and instructor-controlled evaluation tools.



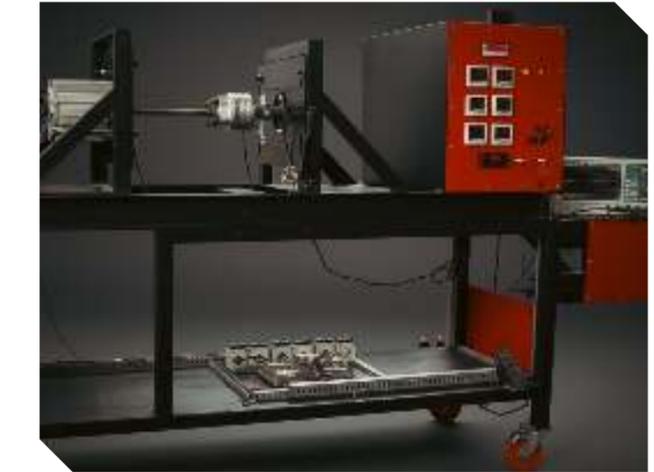
TEST BENCHES AND DIAGNOSTIC PLATFORMS

Provides precision testing systems for engines, transmissions, hydraulics, and electric components

CORE SETUPS:

- **Engine Dynamometer Test Bench (DYNTECH 530)**
- **Universal Hydraulic and Transmission Test Benches**
- **EV Motor Test Bench (EMTB)**
- **Ingress Protection (IP-65) Rain Test Equipment**

Enables accurate performance assessment, durability testing, and system validation in controlled conditions.



AI-BASED ENGINEERING SOLUTIONS

Integrates artificial intelligence into engineering systems for inspection, automation, and safety.

KEY PRODUCTS:

- **Munazzaf Automatic Bore Cleaning Robot** – robotic barrel cleaning system
- **Ingress Protection (IP-65)** – to evaluate the water resistance of enclosures, electrical devices and outdoor equipment according to the Ingress Protection (IP) rating system

Designed to enhance accuracy, reduce manual intervention, and improve operational safety.



RESEARCH AND INNOVATION COLLABORATION

Collaborates with national research bodies to promote indigenous innovation.

STRATEGIC PARTNERSHIPS:

- **National Centre of Robotics and Automation (NCRA)**
Development of robotic and automation solutions
- **National Engineering Robotics Contest (NERC)**
Fostering young talent and applied research

Strengthens academia–industry linkages and supports national capability in robotics and AI.



CORE BUSINESS DIVISIONS

01 MRO SUPPORT
(MAINTENANCE, REPAIR & OVERHAUL)

02 INDIGENOUS MANUFACTURING

03 DESIGN & SIMULATION

04 HUMAN RESOURCE CONSULTANCY

HR CONSULTANCY AND TECHNICAL TRAINING

We offer hands-on and immersive training programs that empower operators, technicians, engineers, and institutional partners with the skills required to maintain, operate, and optimize advanced equipment and systems.

CORE MAINTENANCE AND OPERATIONS TRAINING:

- **Equipment Maintenance Training** – Practical instruction on diagnostics, servicing, and upkeep of vehicles, simulators, power systems, and electronic hardware.
- **Vehicle and Machinery Maintenance** – Preventive and corrective servicing of dozers, graders, forklifts, trucks, and specialized vehicles.
- **Calibration and Testing Skills** – Mastery of metrology tools, ISO/IEC 17025 standards, and field calibration practices.

SPECIALIZED TECHNICAL SKILL DEVELOPMENT:

- **Reverse Engineering in Manufacturing** – 3D scanning, CAD modeling, and prototyping.
- **Technical Spare Procurement and Management** – Lifecycle costing, supplier evaluation, and inventory control.





INFRASTRUCTURE AND CAPABILITIES

Musanna Technical (Private) Limited operates with a vertically integrated infrastructure capable of delivering end-to-end engineering, manufacturing, testing, and support services across defense, industrial, and healthcare domains. From prototyping to deployment, every process is carried out in-house with precision, speed, and scale.

- State-of-the-art factories and fabrication workshops
- Electronics and communication labs
- ISO/IEC 17025-aligned testing and calibration labs
- R&D and Re-engineering
- Full-scale production lines
- Facilities for lifecycle extension and overhauls





HUMAN CAPITAL

- **50,000+ engineers and technicians**, trained in Eastern and Western systems
- Supported by **CEME-NUST** for continuous skills and innovation



QUALITY AND CERTIFICATIONS

- **ISO 9001 (QMS)** – implemented
- **ISO/IEC 17025** – in process
- Calibration traceability to **NPSL, PCSIR, NIE**
- Comprehensive **QA/QC** protocols with documentation and traceability



RESEARCH AND DEVELOPMENT

Musanna's R&D ecosystem drives indigenous innovation and self-reliance, turning real-world challenges into deployable engineering solutions. With in-house capacity for prototyping, re-engineering, and field validation, we accelerate product cycles and reduce dependence on imports.



PROTOTYPING, RE-ENGINEERING, AND FIELD VALIDATION

Complete spectra of re-engineering, quick prototyping, new proof of concept designs till complete industrial products.



SIMULATION AND AI TRAINING

Indigenous driving and weapon simulators with AI-based feedback for high-risk environments





ELECTRONIC WARFARE

RF-based anti-drone and electronic countermeasure systems, man-portable and vehicle-mounted



ELECTRIC MOBILITY

EV motors, battery systems, regenerative braking, and drivetrain optimization — proven in commercial van conversions.



EMBEDDED HARDWARE

Controller boards, throttle modules, calibration benches aligned with ISO 17025 standards



LEGACY SYSTEM SUPPORT

Re-engineering of critical parts for tanks, MRAPs, and unsupported platforms



MODULAR PLATFORMS

Containerized mobile command units, and workshops for rapid deployment

CLIENTS AND PARTNERS

Domestic Clients

Musanna Technical (Pvt) Ltd is a trusted partner for leading organizations across Pakistan, delivering innovative solutions and dependable services nationwide. Our valued domestic clients include:



INTERNATIONAL CLIENTS

Musanna Technical (Pvt) Ltd proudly serves global partners, delivering engineering excellence and reliable solutions beyond Pakistan's borders. Our international clientele includes:



These collaborations reflect our ability to meet **international quality benchmarks**, adapt to diverse operational requirements, and build long-term, trust-based partnerships worldwide.

CERTIFICATIONS AND ACCREDITATIONS

Musanna Technical (Pvt) Ltd. is committed to international quality and safety standards, ensuring compliance for mission-critical defense, healthcare, and infrastructure projects

QUALITY SYSTEMS AND STANDARDS

- **ISO 9001 (QMS):** Practices implemented across design, production, inspection, and support (certification in process).
- **ISO/IEC 17025:** Calibration lab accreditation underway to validate testing and measurement accuracy.
- **Traceable Calibration:** All processes traceable to **National Physical and Standards Laboratory (NPSL), Pakistan Council of Scientific and Industrial Research (PCSIR), National Institute of Electronics (NIE).**

REGULATORY COMPLIANCE

- **Defense and Public Sector Registration:** Approved for participation in national procurement and strategic contracts.
- **Product Testing and QA:** Electrical, mechanical, environmental, and burn-in testing for reliability.
- **QA and Traceability:** Batch-coded items, revision-controlled documentation, and audit-ready records.
- **Safety and Environmental Controls:** Compliance with labor, environmental, and workplace safety regulations.



SUSTAINABILITY

Musanna operates with a strong sense of responsibility toward **national progress and environmental stewardship**. Sustainability is embedded in the **technologies we develop, the materials we use, and the long-term impact we create** for communities and institutions across Pakistan.



ENERGY-EFFICIENT OPERATIONS

- Adoption of renewable power sources (solar integration in facilities and containerized units)
- Energy conservation through efficient HVAC systems, LED lighting, and optimized production processes

GREEN SUPPLY CHAINS

- Partnering with local vendors to reduce transport emissions.
- Encouraging suppliers to adopt sustainable practices.

RESPONSIBLE MATERIALS AND WASTE MANAGEMENT

- Use of recyclable metals, composites, and eco-friendly coatings
- Safe handling of industrial waste, paints, and chemicals to meet environmental standards.

COMMUNITY AND ENVIRONMENTAL IMPACT

- Supporting reforestation, awareness, or clean-energy projects.

CAREER AND CULTURE

At Musanna, **people are our greatest strength**. Our culture is built on **integrity, collaboration, and purpose**, enabling individuals to grow while contributing to meaningful work.



GROWTH



VALUES



IMPACT

AT MUSANNA, IT'S AN OPPORTUNITY TO **ENGINEER PROGRESS AND MAKE A LASTING DIFFERENCE**.

WHY CHOOSE MUSANNA

Musanna is one of Pakistan's few **truly indigenous engineering solution providers**, uniting **design, manufacturing, calibration and deployment under one roof**.



CHOOSING MUSANNA MEANS CHOOSING RESILIENCE, INNOVATION, AND NATIONAL CAPABILITY.

STAY CONNECTED WITH INNOVATION

Follow Musanna Technical across all platforms to stay updated on engineering solutions, and defense technology innovation, innovations, the practical steps we're taking to transform mobility systems and engineering solutions

Join Our Community



Website: www.musannatech.com



Facebook: Musanna Tech



X(Foremerly Twitter): @musannatech



LinkedIn: company/musanna-technology



Instagram: @musannatech



YouTube: @musannatech

CONTACT NOW



MISSION-DRIVEN

Advancing self-reliance, technological sovereignty, and national resilience



INTEGRATED IN-HOUSE FACILITIES

Speed, control, and quality unmatched by imports



INDIGENOUS INNOVATION

From simulators to EVs and anti-drone systems — designed, tested, and built in Pakistan



PROVEN IN THE FIELD

Reliable performance in combat, disaster relief, training, and remote operations



TRUSTED BY INSTITUTIONS

Defense, utilities, and R&D sectors



SUSTAINABLE AND ETHICAL

Local jobs, lifecycle extension, and reduced environmental impact