



PIAM3D

Pakistan Institute of Additive Manufacturing

Transforming Ideas into Reality
Complete Additive Manufacturing Solutions



AUTOMOTIVE



INDUSTRIAL



AEROSPACE



CONSUMER GOODS



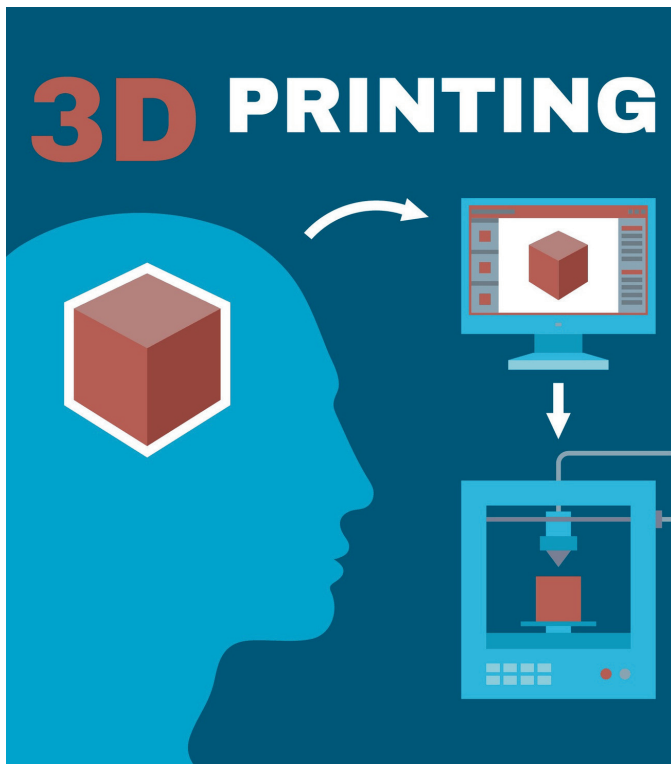
HEALTHCARE

The Full Solution

We provide a complete and integrated additive manufacturing workflow. At PIAM3D facilities support every stage of production, including 3D scanning, CAD designing, metal, polymer and ceramic additive manufacturing, post-processing, electropolishing and quality assurance.

With modern equipment and skilled staff, we offer reliable, efficient, and precise solutions for a wide range of applications in aerospace, medical and automotive industries. Whether developing prototypes or producing functional parts, PIAM3D enables a smooth transition from concept to final product.

CONCEPT . DESIGN . MANUFACTURING . DELIVERY



Understanding the Role of Advanced Additive Manufacturing

In modern engineering and manufacturing environments, organizations often structure their operations into tiers to ensure efficiency, reliability, and high-quality output.

Tier 1 involves the production of core components, including critical parts and assemblies used in demanding industrial, aerospace, automotive, and biomedical applications.

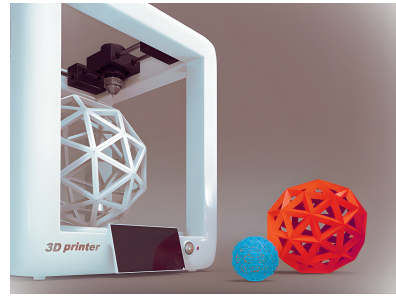
Tier 2 involves creating the tooling, fixtures, molds, and support structures essential for assembling and protecting core components. PIAM3D's additive processes enable rapid, high-precision fabrication of these elements.

Tier 3 encompasses engineering activities such as design, analysis, testing, and validation to ensure that products from Tiers 1 and 2 meet performance and safety requirements.

At PIAM3D, these capabilities support a wide range of sectors by providing high-precision additive manufacturing, digital inspection, and engineering services under one roof.

CAPABILITIES

In many advanced engineering sectors, producing complex, low-volume components is essential. PIAM3D offers comprehensive additive manufacturing services, from precision scanning, reverse engineering and CAD design to metal/polymer 3D printing and post-processing, supported by modern technology and expert staff. We deliver high-quality, accurate parts efficiently, supporting critical applications in aerospace, automotive, medical, and other industrial domains.



Metal Additive Manufacturing

Our metal additive manufacturing uses advanced SLM, DED and Binder Jetting technologies to produce high-quality parts with excellent accuracy and mechanical performance. We create functional prototypes, low-volume production components, and complex geometries not feasible with conventional methods.

Metals	Equipment	Applications
Alloys of	SLM Technology	• Aerospace
• Titanium	Build sizes (mm)	• Automotives
• Aluminum	• 415×415×400	• Biomedical implants
• Nickle	• 300×300×370	• Functional Prototypes
• Stainless Steel	• Ø195×220	• Customized Tools
	☆ DED and BJ Technology	• Light weight and Consolidated Parts
	Build sizes (mm)	
	• 800x1000x700	
	• 150 x 150 x150	
	• 400 x 220 x 200	



3D Scanning and Rev Engineering

Our 3D scanning and reverse engineering services capture accurate digital models using advanced 3D Scanners. We convert physical parts into precise CAD data for redesign, validation, and manufacturing. And QC ensures the quality.

Equipment	Specs	Applications
• 3D Scanner, Creaform	• Accuracy: 30 µm • Resolution: 50 µm • Part Size: 0.1-4 m	• Metrology • Reverse Engineering
• 3D Laser Scanner, Scan Tech	• Accuracy: 20-30 µm • Resolution: 20 µm • Part Size: 1-5 m	• Restoration • Digital Inventory
• 3D Scanner, Artec	• Accuracy: 50 µm • Resolution: 100 µm • Part Size: Min 5 mm	• Roughness Measurement • NDT
• Surface Profiler	• Range: 350 µm • Resolution: 8 nm • Trav Len: 1.25-12.5 mm	
• Micro CT	• Spacial Res ≤ 2 µm • Part Size: 1-500 mm	



Training, Internships & Consultation

PIAM3D offers specialized trainings in DfAM, internships, BS final year project, MS Research, technical workshops, and expert consultation services to support industry, academia, and innovation-driven organizations.



Polymer and Ceramic 3D Printing

At PIAM3D polymer additive manufacturing uses FDM, SLA, SLS, and composite printing to produce precise, reliable parts. We create functional prototypes, lightweight components, and complex geometries for diverse applications.

Polymers	Equipment	Applications
• ABS	FDM Technology	• Composite Moulds
• PEEK	Build sizes (mm)	• Casting Patterns
• PLA	• 610×508×508	• Biomedical implants
• PC	• 223×223×305	• Functional Prototypes
• Nylon	• 320×132×154	• UAVs Components
• PVA	SLS Technology	
• SiC	Build size (mm)	
• Gypsum	• 360×360×600	
• Fused Silica	SLA Technology	
	Build size (mm)	
	• 380×380×250	
	Binder Jet Technology	
	Build sizes (mm)	
	• 254×281×203	
	• 800×500×400	



Post Processing

Post-processing at PIAM3D enhances the strength, surface quality, and overall functionality of additively manufactured parts, preparing them for real-world applications.

Services	Equipment	Applications
• Electro-Polishing	• Dry Electro-polishing - Capacity (mm) 500Ø×250, ~1µm Ra	• Surface Finishing • Dim Accuracy
• Shot Peening	• Shot Peening Machine - Capacity(mm) 900×600×700 - Pressure: 5-7bar	• Stress Relieving • Annealing • Descaling
• Heat Treatment	• Environmental Furnace - Capacity(mm) 420×500 - Temperature 1150°C	• Other Equipment • ☆ Surface Grinder - Max Grinding Size(mm) 500×1000×400
• CNC Wire Cutting	• EDM Machine - working Size (mm) 596×880×500 - Wire Thickness: Ø0.12 ~ Ø0.18 mm	• ☆ CNC and milling Machine
• AFM Machine	• Abrasive Flow Machine - working Size (mm) 1050×850×400 - Min Polishable Channel: Ø5 mm	



Our In House Equipment



Our Collaborations



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