2025
Suzhou China

FASTFORM

From Prototype to Mass Production
FastForm·Redefine Rapid Manufacturing

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Product Brochure

From Prototype to Mass Production
FastForm·Redefine Rapid Manufacturing

FAST FORM

CATALOGUE

CATALOG

ABOUT US

COMPANY PROFILE 01

From Prototype to Mass Production
FASTFORM · Redefining Rapid Manufacturing

FastForm 3D Technology Co., Ltd., abbr: "FastForm", was jointly established by a doctoral research team from Nanyang Technological University and Huazhong University of Science and Technology. We specialize in industrial applications of metal 3D printer, offer additive manufacturing full solutions for global dental, industrial, research and educational sectors. Our integrated technological ecosystem encompasses complete industrial chain capabilities including equipment R&D, materials science, process optimization and intelligent software development.

Through our fully own R&D system, FastForm has pioneered China's first comprehensive additive manufacturing equipment of spanning from desktop to industrial-grade solutions(DeskFab/M140/M180/M220/M300/M420/M500/M800). Our FastLayer® Intelligent Industrial Platform, incorporating open source architecture and AI algorithms, has broken through conventional process limitations and secured 38 domestic and international patents. This innovative platform establishes new digital production paradigms for precision manufacturing in medical personalization, industrial components, precision tooling, aerospace and other advanced sectors. With nearly 1,500 units installed across 40+ countries worldwide, we consistently help clients achieve cost-efficiency improvements.

As a Pioneer in China's additive manufacturing industrialization and mass production, FastForm implements a three-pillar strategy of "independent technology, intelligent processes and global services". We remain committed to our vision of "Redefining Rapid Manufacturing from Prototype to Mass Production", empowering the global manufacturing sector's digital and intelligent transformation.

FASTFORM

2016
FOUNDED IN

40+
EXPORT COUNTRIES

1500+
GLOBAL INSTALLATION

10000+ m²
FACTORY AREA

02 DEVELOPMENT HISTORY

FASTFORM
Development History

2016
- Apr.
  The company was established with angel investment.
- Oct.
  Successfully developed China's first commercial dual-laser dual-galvo M500 system, breaking foreign technological monopolies.
- Nov.
  Awarded funding under the 7th batch of the 'HaiChuang Program' (Overseas High-level Talent Innovation and Entrepreneurship Program).

2017
- Oct.
  The FastLayer system has been successfully developed and patented.

2020
- Jul.
  Signed contract for the M800 system - one of China's largest build-volume industrial 3D printers at the time.

2021
- Sep.
  Jiangsu Company was established, marking the beginning of a new development chapter.

2022
- Sep.
  The dual-laser dental-specific system was successfully launched, establishing itself as one of the most efficient dental 3D printing solutions on the market at that time.

2023
- May.
  Launched the cost-effective FF-M140C system, redefining single-laser metal 3D printing.
- Nov.
  Completed Series A strategic financing with participation from Huagong Tech (SZSE: 000988) and multiple institutional funds.
- Dec.
  Launched the multi-laser FF-M420Q system for shoe molds and consumer electronics applications, leading to a new era of industrialized metal 3D printing.

2024
- Jun.
  Launched the industrial mass-production model FF-M300S.
- Dec.
  Launched the desktop metal 3D printer - DeskFab.

FASTFORM

03 PATENT CERTIFICATE

18+ Authorized Patents

A Metal Wire Additive Manufacturing Equipment and Additive Manufacturing Method Based on Alternating Magnetic Field

Real - time Detection Software V1.0 for Metal 3D - Printing Melten Pool

Scanlab Galvo Distortion Automatic Calibration Software

FastLayer Slicing Software V1.1

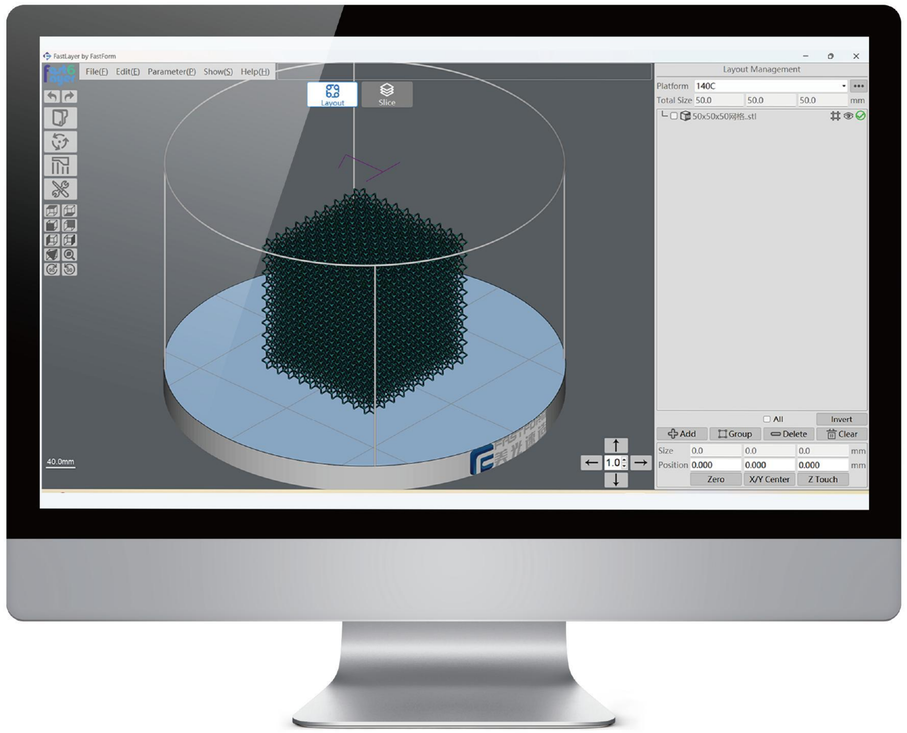
30+ Software Copyrights

High - Temperature - Resistant Material 3D Printer

Metal 3D - Printing Filtration System

High - tech Enterprise Certificate

04 SOFTWARE INTRODUCTION



FastLayer

Intelligent Model Preprocessing Engine

Utilizing AI-powered topology optimization algorithms to automatically identify stress concentration areas in complex models such as aero-engine blades and medical implants.

Intelligently Generates lightweight Support Structures and Optimized layout Solutions

"Supports multi-model differential parameter configuration (120+ core parameter library), enabling one-click slicing for specialized processes such as gradient material components and conformal cooling molds."

Large-Scale Industrial Data Processing

The world's first metal slicing system supporting 10GB-level binary data (e.g., satellite fuel tank brackets, nuclear reactor components).

Featuring a CUDA-based GPU acceleration architecture, it delivers 300% higher slicing efficiency compared to conventional software, with daily processing capacity reaching 20 sets of 2.5-meter-scale aerospace components.

AI Self-Repairing Process

"Integrated GAN-based intelligent repair module automatically corrects non-manifold edges, holes, and normal errors, achieving 99.6% pass-through rate for damaged models;

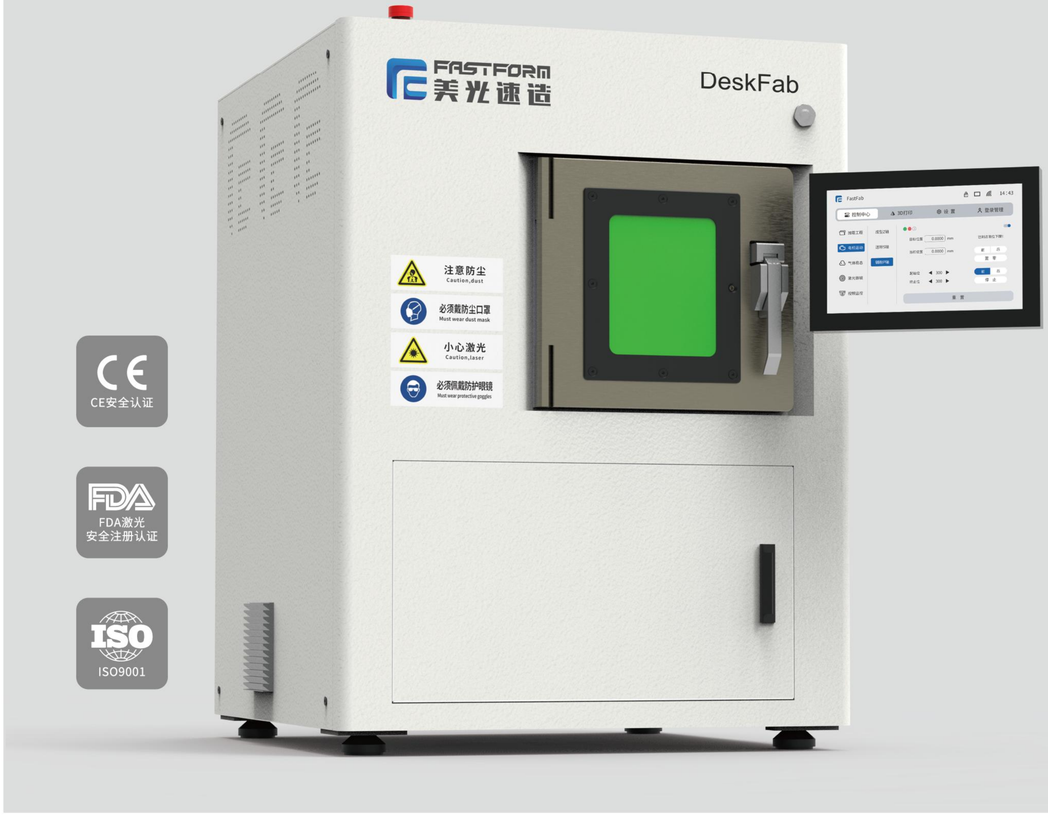
Real-time thermo-mechanical coupling simulation system predicts and compensates for printing deformation in titanium/aluminum alloys, ensuring ±15μm dimensional accuracy for critical features."

Multi-laser Lntelligent Collaborative Control

In the dynamic stitching mode of the 36 - galvanometer, the AI path planning algorithm achieves the precise control of the heat - affected zone overlap rate within 5%;

The stress optimization algorithm makes the tensile strength dispersion of the multi - laser stitching area less than 3%, reaching 98% of the mechanical properties of the overall formed part.

05 PRODUCT INTRODUCTION



DeskFab series

Desktop 3D Printer series

DeskFabH1 — Desktop metal 3D printer dedicated to education and scientific research;

DeskFabX1 — Desktop metal 3D printer specialized for dentistry.

Dental

Education/ Research

FUNCTIONAL CHARACTERISTICS

- All-in-one Integration
  Space Revolution
- Permanent Filtration System
  0 Cost, 0 Replacement, 0 Risk
- One-to-N intelligent collaboration
  Education & Scientific research
- One-click printing & one-click typesetting
  Friendly master it for beginners
- LFPT - Light Following Powder
  Spreading Technology
- Multi-functional metal 3D printer
  Available for multiple metal materials

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	Φ100×80mm	Printer Dimensions	600×650×860mm（L×W×H）
Machine Weight	120kg	Protective Gas	Nitrogen, Argon
Laser Power	Single laser, 300W	Recoater Type	Flexible soft blade
Layer Thickness	30-60μm（adjustable）	Powder feeding Type	Top powder feeding,one-way recoating
Rated Power	1.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Cobalt-chromium alloy, titanium alloy, pure titanium, etc.		

APPLICATION DEMONSTRATION

05 PRODUCT INTRODUCTION

FF-M140 series

Desktop 3D Printer M140 series

FF-M140H-Single Laser metal 3D printer for education & scientific research;

FF-M140C-Single Laser metal 3D printer for dentistry.

Dental

Education/ Research

FUNCTIONAL CHARACTERISTICS

- 7 years of verification
  Worry-free operation
- FastForm programmed own software ,
  Open source for parameter database
  Simply work-flow for operation
- Worry-free after-sales service
  Worry-free usage
- Permanent filtration system
  0 cost,0 replacement, 0 risk
- Supports up to 150μm layer thickness process development
- >7 years of verification ,built-in HD camera
  Online remote monitoring and operation
  Real-time tracking production status

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	Φ140×100mm	Printer Dimensions	1050×870×1750mm（L×W×H）
Protective Gas	Nitrogen, Argon	Layer thickness	20μm-150μm
Machine Weight	450kg	Recoater Type	Flexible soft blade
Beam size	50-80μm	Laser Power	Single laser, 1x500W
Rated Power	1.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Stainless steel, titanium alloy, tool steel, high-entropy alloy, cobalt alloy, aluminum alloy, copper alloy, etc.		

APPLICATION DEMONSTRATION

05 PRODUCT INTRODUCTION

CE安全认证

FDA激光安全注册认证

ISO9001

FF-M220 series

Dual-Laser Metal 3D Printer M220 Series
FF-M220—Medical &Dental Metal 3D Printer;
FF-M220—Prototype Metal 3D Printer.

Prototype Dental Medical

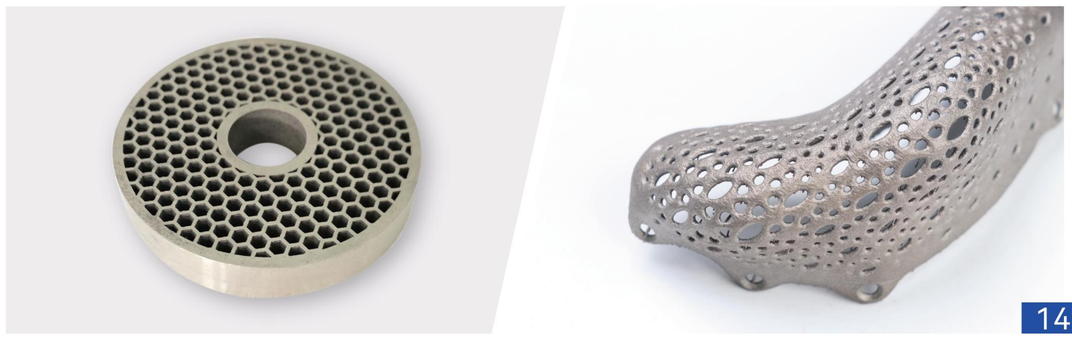
FUNCTIONAL CHARACTERISTICS

- Dual-laser large-format Production efficiency increased by 200%
- One-click printing & one-click typesetting Friendly master it for beginners
- Stable equipment Mature process
- Permanent filtration system 0 cost,0 replacement, 0 risk
- LFPT - Light Following Powder Spreading Technology
- Worry-free after-sales service Worry-free operation

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	220×140×100/200mm(L×W×H)	Printer Dimensions	1150×750×1800mm（L×W×H）
Protective Gas	Nitrogen, Argon	Layer thickness	20μm-100μm
Machine Weight	500kg	Recoater Type	Flexible soft blade
Beam size	50-80μm	Laser Power	Dual lasers, 2x500W
Rated Power	2.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Stainless steel, titanium alloy, tool steel, high-entropy alloy, CoCr alloy, aluminum alloy,copper alloy, etc.		

APPLICATION DEMONSTRATION



05 PRODUCT INTRODUCTION

CE安全认证

FDA激光安全注册认证

ISO9001

FF-M300 series

Industry Metal 3D Printer M300 Series

FF-M300H—Metal 3D printer for education & scientific research;

FF-M300S—Metal 3D printer for prototyping;

FF-M300—Metal 3D printer for mold manufacturing.

Prototype

Mold

Consumer electronics

Education/ Research

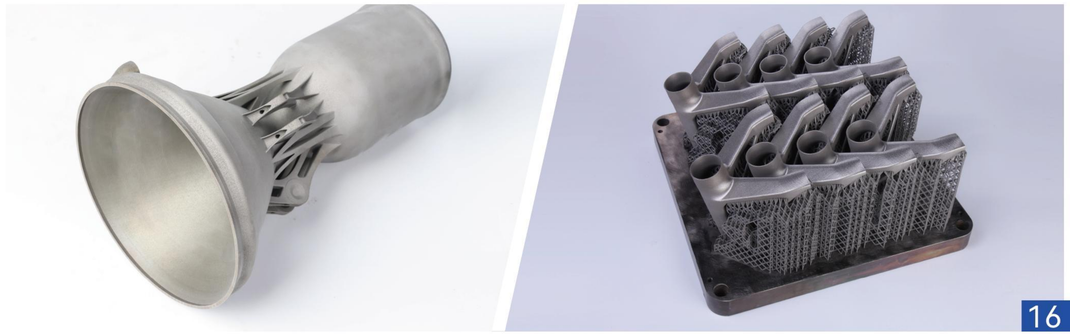
FUNCTIONAL CHARACTERISTICS

- Dual ultra-fast engines
  Double the efficiency
- Ultimate mechanical structure
  Space cost reduced by 30%
- Zero-touch dynamic
  Seamless stitching
- Permanent filtration system
  0 cost,0 replacement, 0 risk
- Powder circulation system integrated for all series

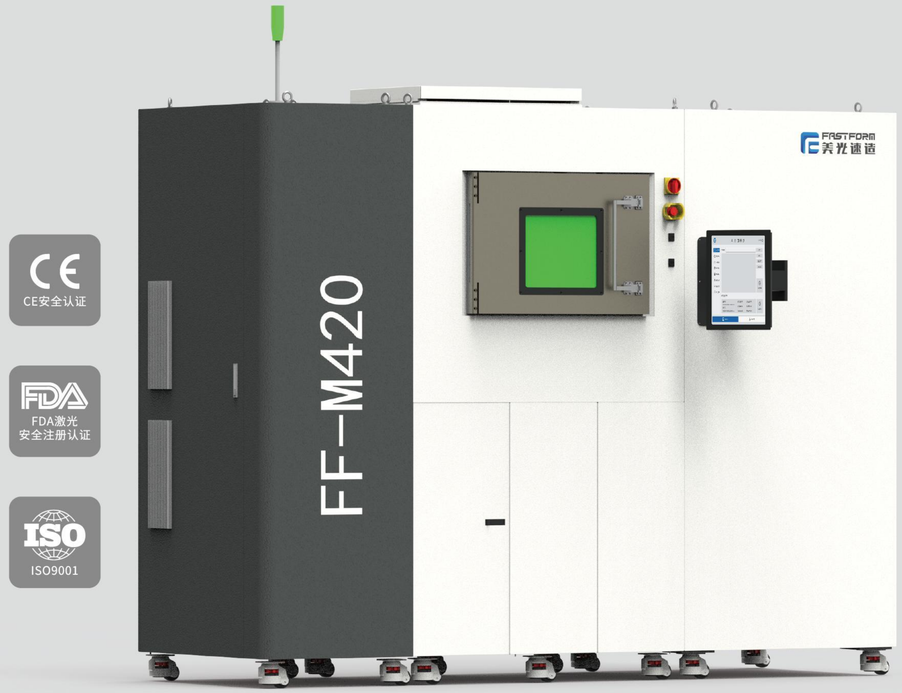
TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building volume	300×300×400mm（L×W×H）	Printer Dimensions	1960×870×2120mm（L×W×H）
Protective Gas	Nitrogen, Argon≤2L/min	Recoating type	Top powder feeding, bidirectional recoating
Machine Weight	1200kg	Recoater Type	Flexible Soft blade
Optical system	F-theta lens	Laser Power	Dual lasers, 2x500W
Scanning speed	10m/s（max）	Rated Power	4kW AC380V
Forming rate	100cm³ /h（max）	Filtration System	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Tool steel, stainless steel, titanium alloy, superalloy, aluminum alloy, etc.		

APPLICATION DEMONSTRATION



05 PRODUCT INTRODUCTION



CE安全认证

FDA激光安全注册认证

ISO9001

FF-M420 series

Industry Metal 3D Printer M420 Series

FF-M420 — Metal 3D Printer for Mold Applications;

FF-M420 — Metal 3D Printer for Consumer Electronics;

FF-M420 — Metal 3D Printer for Aerospace.

Mold | Consumer electronics | Education/ Research | Aerospace

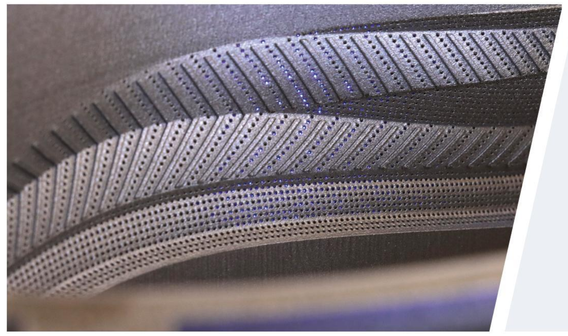
FUNCTIONAL CHARACTERISTICS

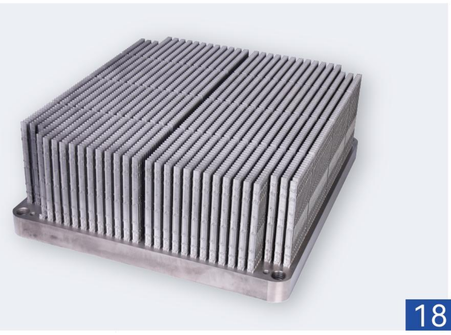
- 8 lasers + LFPT Bidirectional recoating
  Production efficiency increased by 300%
- Ultimate mechanical structure
  Small volume light weight
- Zero-touch dynamic
  Seamless stitching
- Permanent filtration system
  0 cost,0 replacement, 0 risk
- FastLayer
  One-click typesetting one-click slicing
  one-click hollowing
- Large-scale solutions
  Worry-free machine purchase

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	420×380×400mm（L×W×H）	Printer Dimensions	2780×1140×2200mm（L×W×H）
Protective Gas	Nitrogen, Argon	Recoating Type	Top powder feeding, bidirectional recoating
Machine Weight	1600kg	Recoater Type	Flexible soft blade
Rated Power	10kW AC380V	Laser Power	4, 6, 8 lasers (optional), 1x500W
Scanning speed	10m/s（max）	Galvo type	Raster-type high-precision digital encoding lens
Forming rate	240cm^3/h（max）	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Tool steel, stainless steel, titanium alloy, superalloy, aluminum alloy, etc.		

APPLICATION DEMONSTRATION





05 PRODUCT INTRODUCTION

CE安全认证

FDA激光安全注册认证

ISO9001

FF-M800 series

Large-size Metal 3D Printer M800 Series
FF-M800 — Metal 3D Printer for Mold;
FF-M800 — Metal 3D Printer for Aerospace.

Consumer electronics | Military | Automotive | Aerospace

FUNCTIONAL CHARACTERISTICS

- LFPT (Light-Following Powder Spreading Technology)
  Reduce 15 seconds per layer
  Saving 41 hours for 10K layers
- Say goodbye to single-layer limitations
  Dual-layer wind field redefines the heat dissipation logically
- Zero-touch dynamics
  Seamless stitching
- FastLayer ultra-large-scale industrial data processing
  Efficiency increased by 300%
- FastFab AI intelligent control with full-dimensional quality inspection during 3D printing process

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	650×650×800mm（L×W×H）	Printer Dimensions	3500×6000×4300mm（L×W×H）
Protective Gas	Nitrogen, Argon	Preheating temperature	200℃
Machine Weight	6000kg	Recoating Type	Top powder feeding, bidirectional recoating
Rated Power	25kW AC380V	Laser Power	4, 6, 8 lasers (optional), 1X500W
Scanning speed	10m/s（max）	Galvo type	Raster-type high-precision digital encoding lens
Forming rate	240cm²/h（max）	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Tool steel, stainless steel, titanium alloy, superalloy, aluminum alloy, etc.		

APPLICATION DEMONSTRATION

06 GLOBAL LAYOUT

5+

Overseas after - sales service outlets

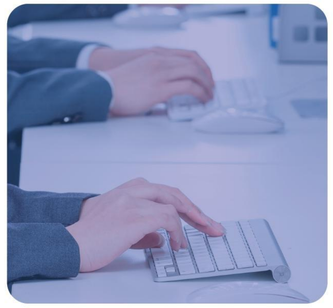
40+ countries

Sales into the global market

1500+ units

Global sales deployment

07 SERVICE SUPPORT



FASTFORM • Dedicated service to meet all needs

Comprehensive training system

A systematic and comprehensive training process, combined with high-standard practical operation assessments, ensures users can master operation and application skills in a short time and generate benefits rapidly.

Intimate equipment maintenance plan

Intimate equipment maintenance plans provide professional installation and debugging services, regular follow-up visits, timely sharing of new technology applications, and lifelong equipment maintenance support.

Lifetime technical support

Professional technical and process development team can deeply customize solutions for users, collaborate to develop optimal new material processes, and provide lifelong technical support.

Efficient and fast after-sales service

24/7 around-the-clock after-sales service ensures rapid response, providing instant online support and on-site maintenance services to eliminate customer worries.