



# INDOMAKE INSM-450



Multi-Laser, Large-Format  
Metal 3D Printing for  
Industrial-Grade Manufacturing



ISO 9001 : 2015  
MANUFACTURING  
FACILITY



DSIR-GOVERNMENT  
OF INDIA CERTIFIED  
IN-HOUSE R&D UNIT



MSME  
Zed  
BRONZE  
MSME SUSTAINABLE  
(ZED)

# INDOMAKE INSM-450

## **Multi-Laser, Large-Format Metal 3D Printing for Industrial-Grade Manufacturing**

Unleashing new potential in industrial manufacturing, the **INDOMAKE INSM 450** is a cutting-edge metal 3D printer designed for large-scale, high-precision part production. Engineered by STPL 3D, this machine features advanced multi-laser architecture, high-speed scanning systems, and exceptional build volume — ideal for industries that demand speed, quality, and reliability. Whether you're in aerospace, automotive, tooling, or medical sectors, **INSM 450** brings performance and scale together to redefine how metal parts are produced.

## **KEY FEATURES**



### **Large Build Volume:**

With a build capacity of **425 x 425 x 450 mm**, INSM 450 enables the production of large components or multiple parts in a single print job, maximizing productivity.



### **Multi-Laser, High-Speed Operation:**

Equipped with dual to quad Yb-fibre lasers (500W/700W optional), and dynamic focus scanning optics, the machine delivers unmatched precision and speed — up to 34 m/s scanning speed.



### **Advanced Scanning System:**

Multi-galvanometer system ensures efficient beam control and uniform part quality, even in complex geometries and dense part layouts.



### **Robust Powder Handling System:**

The closed single-cylinder powder delivery system with bidirectional/unidirectional modes improves safety, reduces contamination, and ensures consistent powder distribution.



### **Industrial-Grade Software & Control:**

Powered by Laseradd's self-developed control software, the printer offers seamless operation, real-time monitoring, and intelligent fault detection for uninterrupted production.



### **Ultra-Precision Filtering with Fresh Air Protection:**

Clean working environment and reduced powder exposure ensure operator safety and part integrity.



### **Intelligent Automation:**

Designed for 24/7 unattended operation, with intelligent control for minimal human intervention.

## KEY FEATURES

### ◆ Aerospace & Defense

Complex, lightweight structural components with high mechanical strength

### ◆ Automotive

Rapid prototyping and end-use metal parts like brackets, housings, and performance components

### ◆ Medical & Orthopedic

Implants and surgical tools with biocompatible metal alloys

### ◆ Tooling & Molds

Custom die and mold production with reduced lead times

### ◆ Power & Energy

Turbine blades, heat exchangers, and other high-temperature components

## TECHNICAL SPECIFICATION

Laser Type	Yb-fibre laser 500W (700W Optional)
Scanning System	Dynamic Focus Scanning System (2–4 Galvanometer)
Scanning Speed	Up to 34 m/s
Build Volume	425 x 425 x 450 mm
Layer Thickness	0.02 mm – 0.2 mm
Dimensions	2540 x 1500 x 2454 mm
Powder Delivery	Single cylinder falling powder (bi/unidirectional)
Control Software	Self-developed Control System
Data File Format	STL or other convertible formats
Power Supply	380V, 50Hz, 10Kw
Working Temp.	15 – 30°C
Materials	Stainless Steel, Cobalt Chromium Alloy, Die Steel, Titanium Alloy, Aluminum Alloy, Super Alloys

# OUR CLIENT BASE



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## SAHAJANAND TECHNOLOGIES PRIVATE LIMITED

Sahajanand Estate, Vakhariawadi, Near Dabholi Char Rasta, Ved Road, Surat - 395 004. GJ, India.

+91 9925113344 [www.STPL3D.com](http://www.STPL3D.com)

[3dinfo@stpl.com](mailto:3dinfo@stpl.com) [/STPL3D](#)