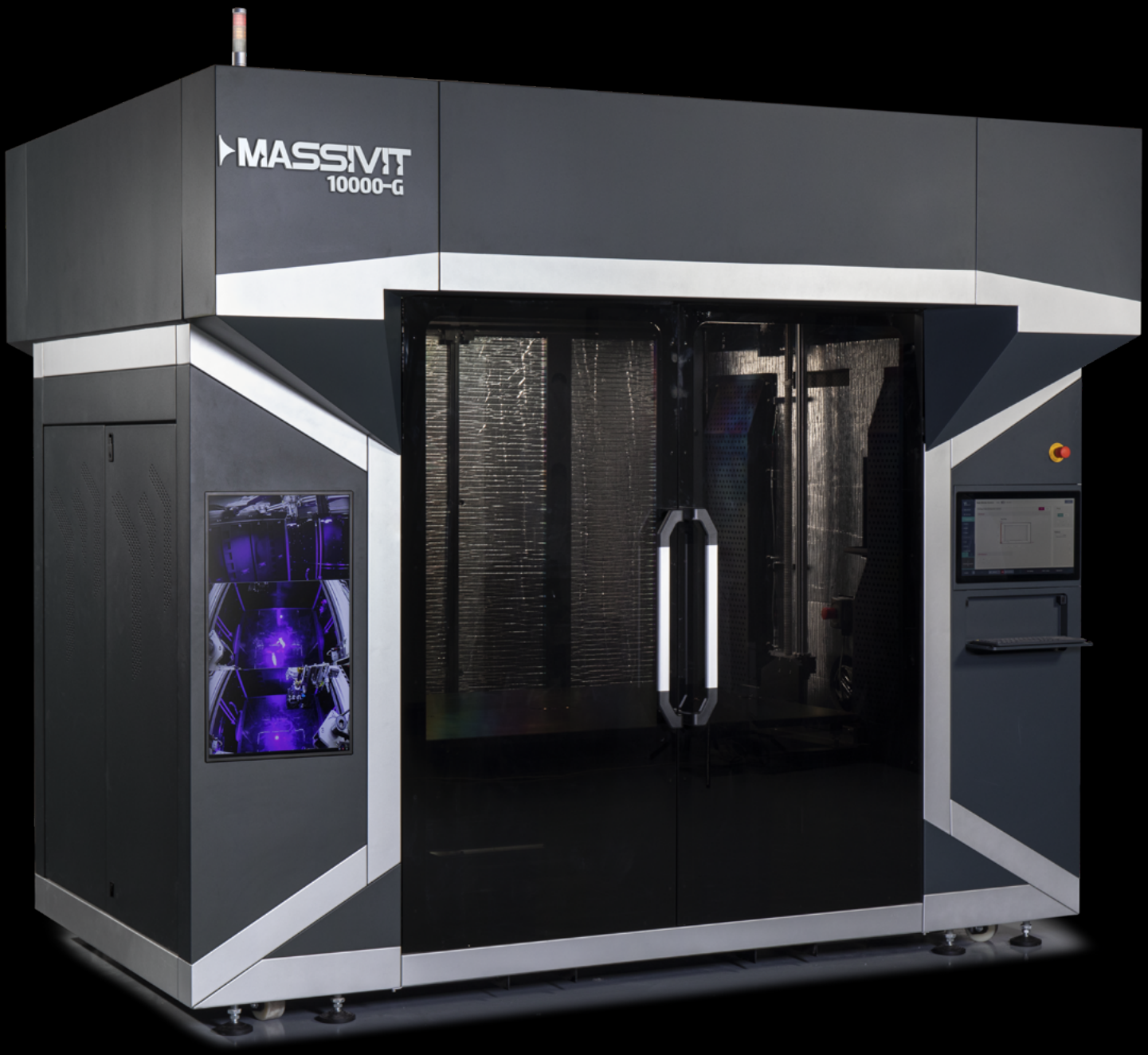
MASSIVIT

10000 & 10000-G

OVERCOMING THE BOTTLENECKS OF MOLD PRODUCTION



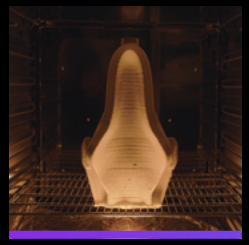
Automate Your tooling

Massivit's Cast In Motion (CIM) technology combines ultra-fast, additive manufacturing technology with high-performance, thermoset materials to enable automated tooling for composites. The Massivit 10000 empowers manufacturers to produce complex, custom molds within a matter of days, instead of weeks.

From 19 Steps to 4 Steps

The advent of composite materials has brought significant advancements to the manufacturing arena, including markedly improved strength-to-weight ratios. However, the associated tooling processes have – until now – been slow, costly, cumbersome, and wasteful. Tooling workflows have demanded a minimum 19 production steps and are reliant on high-skilled, manual labor.

01. Print



02. Cure

03. Soak

04. Finish

Key Benefits for Composit

- **Speed up** mold production time by 80%
- Cut manufacturing **costs by 75%**
- Produce **isotropic molds** suited to high temperatures
- Benefit from **high mechanical and thermal properties** enabled by advanced thermosets

CAD Design →

True Isotropy – Advan
Thermosets Offer Prec

The Massivit 10000 introduces to market the firs
mold for composite manufacturing.
Unlike other additive manufacturing tooling proc
uneven molecular bonds due to their layering me
leverages a thermoset casting material that guaran
and thermal properties across all axes. In particula
low thermal expansion (CTE) at high temperatures. I
stability (HDT) up to 152°C.

Thermoplastic AM Extrus
(Filament or Pellets)

Anisotropic

Extruded Bead 4

Extruded Bead 3

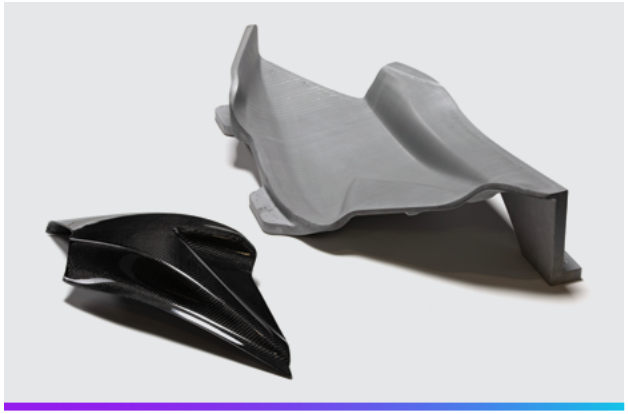
Extruded Bead 2

Extruded Bead 1

Time intervals between 3D-printed extrusions
cooling, causing an inconsistent interface betwee
a recognized weakness.
There are no molecular bonds between layers.

A Range of Applications

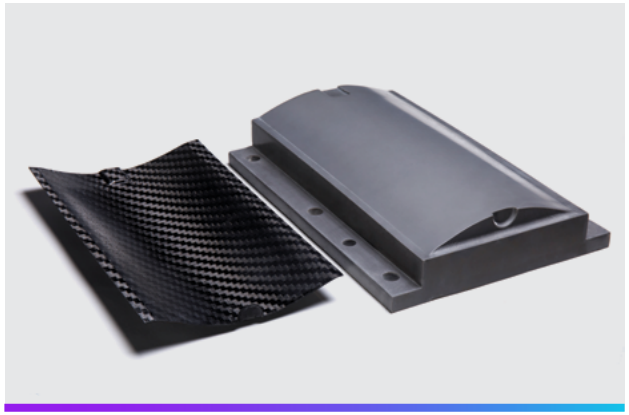
Massivit 's cutting-edge Cast In Motion technology enables production of direct molds & tooling for a range of applications. It also allows for jigs and fixtures to be produced simultaneously with their associated mold.



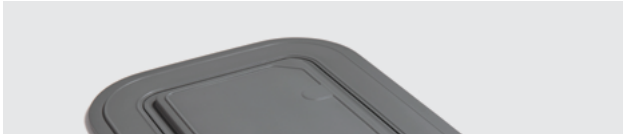
Layup Molds

Washable mandrels

Thermoforming Molds



Molds for Composite Thermoplastics



Freedom of Design

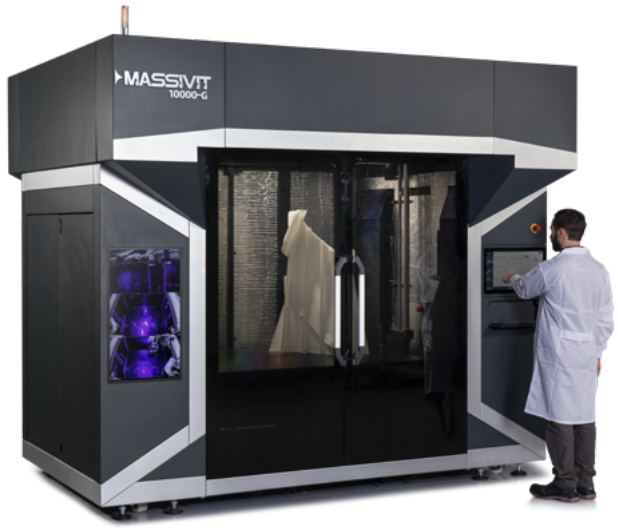
Based on proven additive manufacturing technolog
complete design freedom for complex molds. Print

Freedom of Resolution

The separation between the printed shell and the core
the correlation between the shell's layer thickness a
mold's width and strength. This allows the creation of
thick, isotropic molds without compromising accur

10000-G

The Massivit 10000-G combines Massivit 's two key technologies: Cast In Motion (CIM) and Gel Dispensing Printing (GDP). Comprising separate, dedicated material systems, the 10000-G facilitates digital casting and tooling applications, utilizing the water-breakable DIM WB material and CIM 500 casting material, plus access to Massivit's set of Gel Dispensing Printing materials. This facilitates direct custom manufacturing and functional prototyping using Dimengel materials that respond to essential industry requirements.

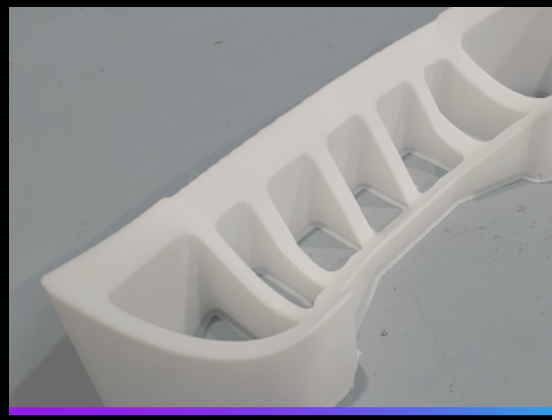


Material	Key Benefit	Massivit 10000	Massivit 10000-G
CIM 500	High Tg & Low CTE	√	√
Dimengel WB	Water Breakable	√	√
Dimengel 400	Tough, Enhanced HDT		√
Dimengel 20 FR	Flame-Retardant		√
Dimengel 90	Cost-Effective		√
Dimengel 100	General Purpose		√
Dimengel 110	High-Performance		√
Dimengel 300	Transparent		√

10000-G Additional Applic

The Massivit 10000-G directly prints isotropic produ
as well as mockups, jigs, fixtures, and functional p

Aftermarket Production

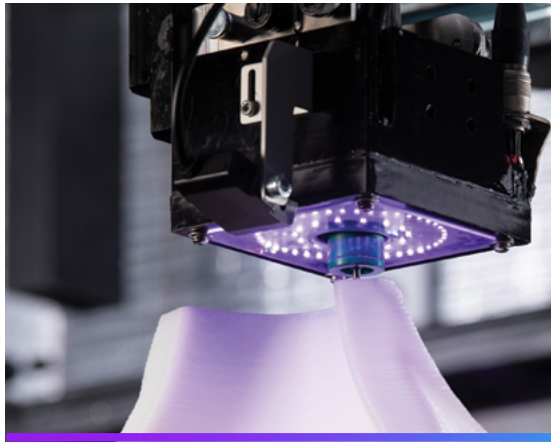


Jigs & Fixtures

Specs at a Glance

Print Configuration	CIM technology: 1 printing head and 1 casting head
	Thermally-controlled print chamber up to 60°C. Removable & interchangeable print tray. Printed shell layer thickness ranges from 0.5 mm-1.3 mm
Print Volume	W x L x H: 1.42 x 1.11 x 1.5 m / 4'8" x 3'8" x 4'11"
Maximum Object Weight	300kg /660 lbs
Motion System	Linear motors for X/Y print head and servo motors for print tray (Z) height
Materials	CIM 500 casting material and Dimengel water-breakable material
Workflow and Software	Software on machine: proprietary front-end software. Input format: STL. Smart Slicer (CAD SW not included)
System Dimensions	W x L x H: 3.1 x 2.2 x 3.1 m / 10'2" x 7'3" x 10'2"
CMS Dimensions	W x L x H: 1.3 x 1.3 x 1.7 m / 4'3" x 4'3" x 5'7"
System Weight	Unpacked ~3500 kg / 7716 lbs. Packed ~4000 kg / 8818 lbs. CMS Unpacked ~621 kg / 1369 lbs. Packed ~687 kg / 1514 lbs

Subsystems



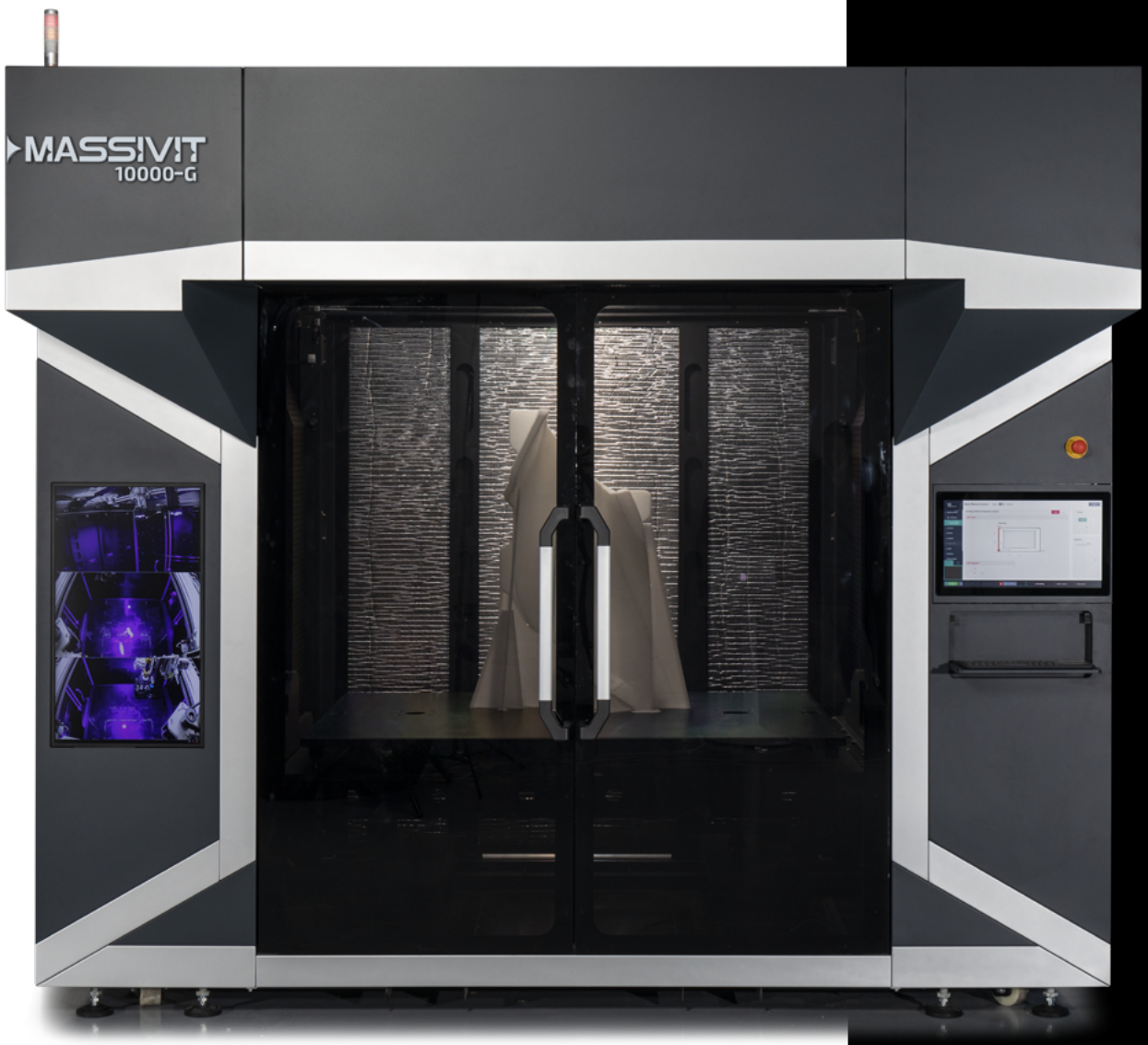
UV System

A ring-shaped UV system allows even curing fro
directions. The system is water-cooled to allow
inside a heated chamber.

Static Mixer

Achieve the Extraordinary

MASSIVIT



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