

Liquid Crystal Magna

Large format industrial LCD 3D printer

A complete manufacturing solution
1,000's successfully deployed around the world

More than 8 million parts made with Magna. Reliable
manufacture of high-performance, functional, cost-
effective parts



Validated by BASF ForwardAM



Printer Specifications



Large volume

510 x 280 x 350mm
20.1 x 11 x 13.8"



High resolution

137 μ m pixel pitch delivering
outstanding finish



Fast printing

$\leq$ 86mm/hr at 350 μ m layers
volumetric speed = 24 ltr/hr



ResinGlide platform

Less waste with interchangeable, easy
cleaning platform



Blow-Peel technology

Patented technology ensures reliable,
fast printing



Long lasting screen

Prints consistently and evenly with no-
UV degradation



Energy efficient

Uses 11% of the energy per kg of
printed material in comparison to
FDM*

See how Magna can transform your business

We provide three unique options to experience the benefits of digital manufacture:



a) Purchase Magna

We design your installation, show you how to optimise your part for additive manufacturing and partner with you in your digital journey. Request a full and comprehensive part cost

[Request a free TCO >](#)



b) Purchase parts

We are a large volume digital manufacturer, the price is higher than if you make them, but much lower than a bureau.

[Request a part cost >](#)



c) Parts as a service

We install the full Magna process and train you free of charge. You only pay for the good parts you make. A three-year commitment is required.

[Enquire today >](#)

Magna Factory

You want lots of cost-effective, functional parts with a great finish?

Magna Factory is your own farm of Magna printers with wash and cure processing, which we install, that exactly meet your digital production needs.

It is the most cost-effective way to make millions of parts. Typical Magna Factory users create over €1m of sales per annum.



Design - Dfam

We start the process by evaluating your part and applying DfAM to improve it; lower its cost, lightweight it, incorporate other components and make it to easier to assemble. We supply a TCO for these parts.



Magna Factory

We will configure Magna Factory to make the quantity you want; we will train your staff and optimise your process.

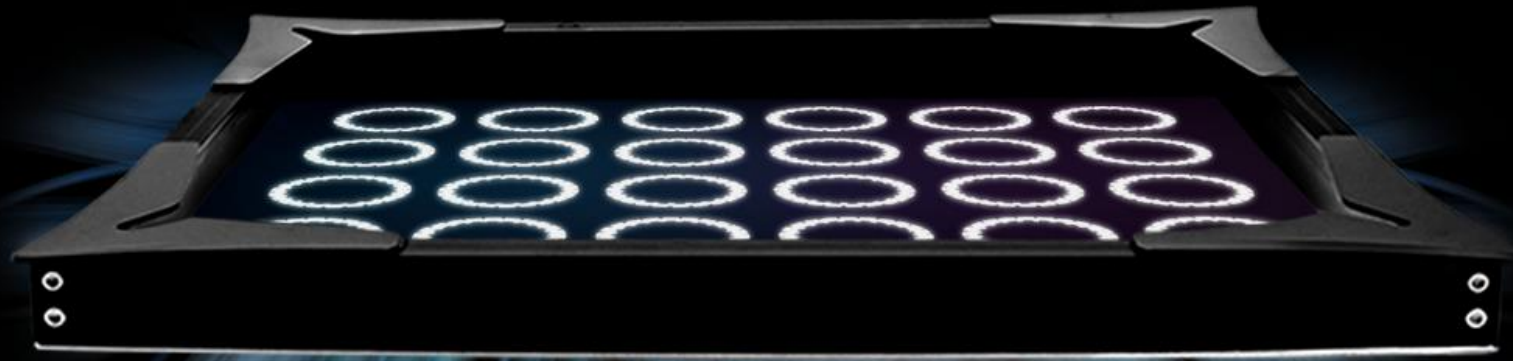


Functional Parts

In production, each Magna, will produce between 1.5kg and 7.5kg of parts per shift. Magna Factory users benefit from special pricing on hardware and substantial discounts on resin. It is specifically designed to deliver a low TCO and encourage maximum usage.

The machine that breathes

Photocentric developed proprietary technology to eliminate unwanted forces at separation. This enables consistent, high-quality prints that are dimensionally accurate and faster print times. Blow-Peel is a patented technology in our Liquid Crystal Magna.



Photocentric Air Wash L

Efficient cleaning

The Air Wash L is designed for large scale production. Its air agitation system cleans very effectively when used with our resin cleaner.



Using Air Agitation

90L, 20G wash unit



Increase throughput

Air Wash L can operate
24/7



Plug and Play

Easy to setup



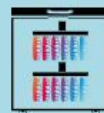
Streamline the process

Designed to hold the entire
Liquid Crystal Magna
platform with full z build
volume



A more thorough clean

Millions of bubbles
contact the prints
delivering a thorough
clean



Clean in one process

Washes both the printed
parts and platform
together



Photocentric recommends BOFA extraction systems to connect to the Liquid Crystal Magna printer and the Air Wash L station.



Photocentric Air Wash L ☐ Photocentric Cure L2

Photocentric Cure L2

Cure large parts with heat and dual wavelength light

The Cure L2 takes a full Liquid Crystal Magna platform and will cure it effectively with both light and heat.

[View Specifications >](#)



Large chamber volume

Cure L2 takes a full Magna platform so you can post-expose on platform.



Time regulated control

Digital timer control, set the time and leave your prints to cure.



Peak properties

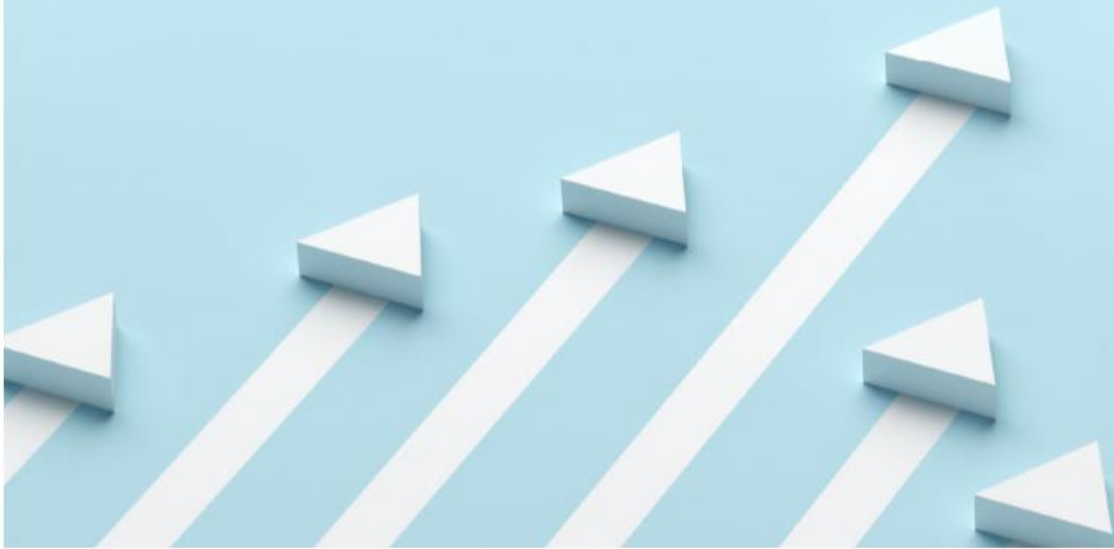
Your printed parts will be dry and strong with ultimate material properties.



Magna advantages

Magna creates more value than any other printer. Used correctly it will last a lifetime. Our customers make lots of parts and create lots of value for their business.

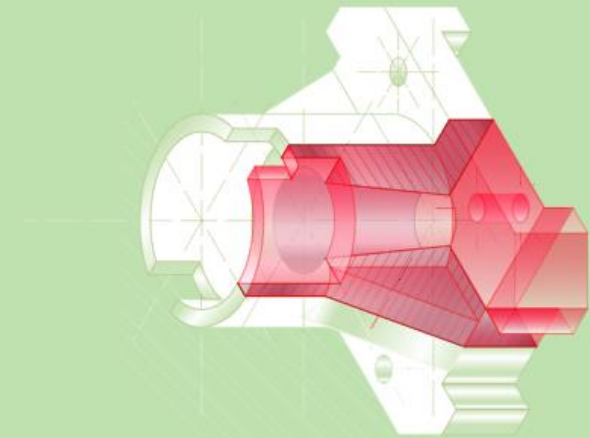
Magna is the workhorse of digital manufacturing.



Part making support

We pride ourselves on our customer service and guarantee you print successfully. We have the most experience of printing with LCD screens of any company. All Magna customers can access this knowledge.

We will orientate and support your part for you using the latest Voxel Dance software and give you advice on how to make your part most efficiently.



Printer comparison

Why buy Magna?

Proven machine for manufacturing volume, Photocentric has printed over 6 million parts with Magna and our customers millions more.

Magna is an open system with a wide variety of Photocentric and BASF validated resins.

IP secure, can operate without internet connection.

Complete processing system with Carbon analysis, TCO, full software and maintenance.

UK manufactured with dedicated highly experienced service department ensuring success.

Printer	Technology	Resolution XY	Build Volume WxDxH	Vol Litres	Peel-release Technology	Fastest reliable rate of print volume	Open / Closed System	Processing Solution	Printer Price	Resin Price /kg	Total Cost of Ownership	Printed Part Cost
Photocentric LC Magna	LCD	137µm	510 x 280 x 350	50	Patented Blow Peel	★★★★★	Open	Designated wash and cure units	\$20,995	\$40-114	Low	Very Low
Nexa3D XiP Pro	LCD	46µm	292 x 163 x 410	19.5	LSPC ACF film	★★★	Open	Designated wash and cure units	\$59,995	\$97-450	Moderate	Moderate
Nexa3D NXE 400Pro	LCD	46µm	275 x 155 x 400	17.1	LSPC Liquid Membrane	★★★★	Open	Designated wash and cure units	\$41,995	\$100-450	Moderate	Moderate
Stratasys Origin One	DLP	4k Light Engine	192 x 108 x 370	7.7	Air	★★	Open	Requires 3rd party solution	\$20,995	\$100-400	High	High
Carbon L1	DLP	4k Light Engine	189 x 118 x 326	7.3	Non-oxygen Layer	★★★★	Closed	Requires 3rd party solution	\$50,000 pa	\$50-399	Extremely High	Very High
Formlabs 3L	2 x 250 mW lasers	25µm	336 x 200 x 300	20.2	Silicone Coated PE film	★★	Closed	Designated wash and cure units	\$12,000	\$119-1299	Moderate	High
Phrozen Sonic Mega 8K	LCD	43µm	330 x 185 x 400	24.4	ACF Film	★★	Open	Designated wash and cure units	\$1,580	\$15-110	Extremely Low	Very Low
Peopoly Phenom XXL V2	LCD	137µm	527 x 296 x 550	85.8	None	★	Open	Requires 3rd party solution	\$8,299	\$44-60	Low	Very Low

The accuracy of parts printed on Magna

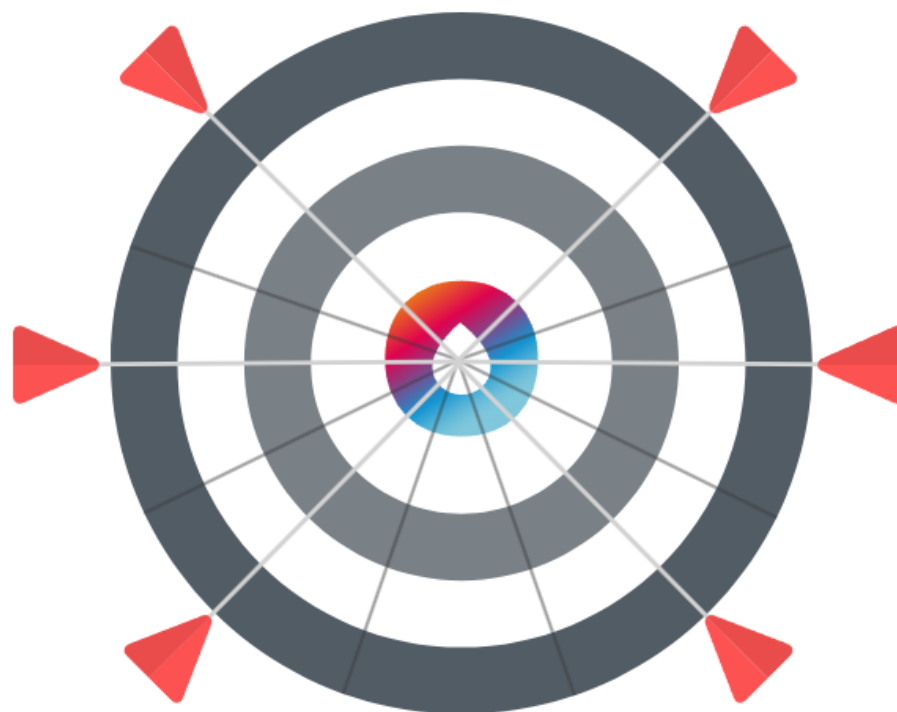
Magna compared to other manufacturing methods

Aspects impacting Magna's printing tolerances, accuracy and precision

How we test accuracy on Magna

Magna is a remarkable printer, and it will deliver accurate, precise and consistent parts if you understand how to use it correctly and adopt the recommended digital file modification.

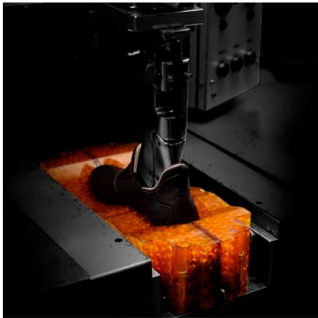
When using high resolution LCD screens, 460nm polymerisation allows consistent and repeatable cure through depth, across the build area and across different Magna printers.



Magna has an 4K screen which provides a 137-micron pixel pitch across its entire 510mm (20.1") by 280mm (11.0") build area. One benefit of using large LCD screens is that they remain fixed in the same position, this means the high-resolution LCD light mask will deliver the same curing profile today as it will in years to come, never going out of focus or alignment. This ensures reliability in the x:y plane. Magna is equipped with a highly accurately engineered linear drive and control system, which ensure reliable and precise performance in the z direction, and hence in overall build volume.

Applications

Liquid Crystal Magna is transforming manufacturing for applications across multiple industries.



Tooling >

Produce functional and affordable moulds for your industrial applications.



Automotive Aftermarket >

Magna is proven as the most effective method of making small and medium sized fixtures for the automotive aftermarket sector.



Dental Models >

Achieve volume production at exceptional speed on your dental models



Figurines and Models >

Our high-resolution printers deliver the optimised solution for making figurines and models



Industrial Parts >

Our LCD technology enables lots of parts to be printed very quickly.



Orthotics >

Improve patient lives with customised medical devices