



# Liquid Crystal MAGNA

## How LC Magna v.2 stacks up against the competition

**\*Value Proposition** - here we have made an assessment which includes the cost of post processing, resin costs, ancillaries and energy consumption.



Machine	Build Volume	Productivity Speed	Accuracy	Resin	Price (RRP)	Advantages	Disadvantages	Value Proposition*
<b>Photocentric</b> LC Magna v.2	510 x 280 x 350mm	<b>Very fast</b> 48 dental models per print in 90 minutes at 100um	<b>Good</b> Pixel pitch 137um Over 90% of scanned data within +/- 100um	Open system + Photocentric	£15,495	<ul style="list-style-type: none"> <li>Excellent for large build volume and mass production runs of small parts. More than 50% less expensive materials and consumables to be replaced less frequently if well maintained. Comparing to Form3L, 2x quantity of dental models per platform in less time. Offering of PRC/(30) is 'more effective' than cleaning with IPA- better surface finish of parts.</li> <li>Large wash unit and curing oven available.</li> <li>Umati protocol to enable MES integration.</li> </ul>	<ul style="list-style-type: none"> <li>Price: x5 Form3, 1.7x more expensive than Form 3L.</li> <li>Resin management system in Formlabs printers.</li> </ul>	★★★★★
<b>Formlabs</b> Form 3	145 x 145 x 185mm	<b>Slow</b> 8 dental models per print in 2 hours at 100um	<b>Good</b> Spot size 85um 25um	Closed system Formlabs only	£3,299	<ul style="list-style-type: none"> <li>Good resolution / accuracy</li> <li>High number of resins available</li> </ul>	<ul style="list-style-type: none"> <li>Small machine – very slow</li> <li>High cost of consumables such as vat also contribute to high running costs and high cost per part.</li> <li>Cleaning with IPA.</li> <li>Expensive resins.</li> </ul>	★★
<b>Formlabs</b> Form 3L	335 x 200 x 300mm	<b>Slow</b> 24 dental models per print in 2 hours 30 minutes at 100um	<b>Good</b> Spot size 85um 25um Accuracy Range+/- 100um Surface in Accuracy Range 94% + / - 8%	Closed system Formlabs only	£8,999	<ul style="list-style-type: none"> <li>Good resolution / accuracy</li> <li>High number of resins available.</li> <li>Wash unit and curing oven available</li> <li>Easy to use software.</li> <li>Easy workflow to follow</li> </ul>	<ul style="list-style-type: none"> <li>High cost of consumables such as vat also contribute to high running costs and high cost per part.</li> <li>Cleaning with IPA.</li> <li>Expensive resins.</li> </ul>	★★
<b>Nexa3D</b> XiP	190 x 120 x 170 mm	<b>Fast</b> 18mm/hr	<b>Good</b> 52um (25um when available)	Open source. Validated resins available from Henkel, BASF and Keystone. Compatibility with other resin manufacturers unconfirmed. 3.8l resin volume	\$5,999	<ul style="list-style-type: none"> <li>Smart resin cartridge</li> <li>Magnetic vat</li> <li>Auto-dispensing resin</li> <li>Digital display</li> <li>Fast printing</li> <li>Wash/Cure unit all in one (basic)</li> <li>Feedback from printer input, i.e. (tells user vat has been inserted or platform has been removed).</li> </ul>	<ul style="list-style-type: none"> <li>Expensive software (\$3000)</li> <li>General purpose resins slightly more expensive than Photocentric, functional resins are much higher in price and can only be purchased in 5kg volumes.</li> <li>Has additional consumables such as light engine filters that are not required on LC Magna. Standard consumables are very expensive, almost double cost for platform/vat. Many of the post processing tools are sold as a separate package where we include them as part of printer purchase.</li> </ul>	★★★
<b>Stratasys</b> Objet 30 V5 Pro & Prime <small>(only difference in number of available materials to print with)</small>	294 x 192 x 148.6 mm	<b>Data not available</b>	<b>Data not available</b>	Closed system, Stratasys materials only	\$35,000	<ul style="list-style-type: none"> <li>High accuracy/print resolution.</li> <li>Thorough technical support in terms of documentation, videos, and customer support.</li> <li>Variety of payment options including printer leasing (inc. wash unit + 12 months support) and deferred payments.</li> <li>Simple post processing as a large proportion of cross linking takes place during the print.</li> <li>Medical approved resins, bio-compatible resins suitable for prolonged skin contact</li> </ul>	<ul style="list-style-type: none"> <li>More labour intensive in terms of cleaning the inside of the printer.</li> <li>Need to replace head.</li> <li>Higher material costs</li> <li>Photocentric HTDL400 HDT considerably exceeds Stratasys HT material.</li> </ul>	★