

Photocentric

Liquid Crystal
PRECISION 1.5
Product Catalogue



Photocentric



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Liquid Crystal PRECISION 1.5



Precision 1.5 is a standalone unit ideal for detailed prints, in particular jewellery, dentistry and figurines.

Liquid Crystal Display

Integral to the printer is the high-resolution LCD panel used to create parts. The 5.5" display offers a 2K resolution with an XY pixel size of 47 microns, giving exceptional resolution and accuracy.

Fastest Daylight Polymer Printer

Dental Prints 100 micron per 4 seconds. Jewellery prints 50 micron per 11 seconds.

Solid and Strong Drive Unit

An upgraded, maintenance-free drive unit features in the Liquid Crystal Precision. The unit enables increased accuracy over the height of the printer offering increased reliability to print both large, solid parts and small intricate details.

High Quality Electronics

The printer is controlled with a full set of top of the range electronics, ensuring full quality control and long-lasting reliability. With continuous development we offer the best

SPECS

LCD specification	5.5" (2560 x 1440 px)	Connectivity	USB Port
Build Volume	121 x 68 x 160 mm 4.8 x 2.7 x 6.3 in	Dimensions	38 x 35 x 58 cm 17 x 15 x 23 in
Layer Thickness	25, 50, 100 microns 0.001, 0.002, 0.004 inches	Weight	15 Kg (33 Lbs)
XY Pixel Density	47 microns	Software	Photocentric Studio
Cure Speed (at 100 micron and dependant on resin)	4-11 sec/layer	Power requirements	100-240 V, UK/USA/EU plug

1 Year warranty

Pack contents

Printer Hood, Power Supply, Power Adaptor, Allen Key, Replacement vat film x 2, Filter x 5, Funnel, Spatula, Blue Nitrile Gloves- Medium x 2, 250gr of Daylight Resin, Print Sample, USB including; instructions, CE Certificate, MSDS, Photocentric Studio, software/license number

control for all aspects of the printing process.

The power of Printflow3D

Open source and easy to use, Printflow3D is designed to make printing faster and easier. You can files directly into the printer, via USB. The integrated 7" touchscreen allows untethered and fast control of the printer.

Pre-homed build platform

The build platform is factory homed. Now there is no need to home the build platform before every print. This auto homing feature allows for simple plug and play.

Disposable vat system

The printer is supplied with 2 disposable vats, eliminating the need for reskinning and improving print performance. As the price is economical, you have a choice to either simply buy a new vat or to reskin the vat when needed.

Affordable Daylight Resins

Our Daylight Precision resins are specifically developed to give outstanding customer experience and cover any application needed, from Jewellery, Dentistry and Art. All resin is water washable.

Precision Resins



Daylight Precision Dental Castable

Daylight Dental Castable resin is specially formulated to provide high definition moulds. It will leave almost no ash when burnt and create gas evenly as the temperature is increased, avoiding any pressure build up within the casting. It will capture all the details with a very dry surface to provide the ideal finish to your investment mould.

For use with the Liquid Crystal Precision and Precision 1.5 only.



Daylight Precision Firm

Daylight Precision Firm polymers are ideal for making objects where you want a very hard object with slight compressive ability under high force and minimal shrinkage. Objects will bend a little and stretch slightly when under duress. They exhibit high tensile shear properties and limited elongation, objects can only be bent and compressed with force.

For use with the Liquid Crystal Precision and Precision 1.5 only.



Daylight Precision Hard

Daylight Precision Hard White resin has been created to produce highly strong, precise parts on the LC Precision Printer range along with a clean white colour. The printed parts will exhibit exceptional tensile strength and elongation comparable to that of acrylic and polyimide. The rigid parts produced show minimal shrinkage possible along with great accuracy. The resin is water and soap washable, so no need for IPA and will provide a dry surface finish after post exposure.

For use with the Liquid Crystal Precision and Precision 1.5 only.



Daylight Precision Model

Precision Model resin has been developed for prototyping of highly detailed objects, for example figurines and jewellery models. The prime colour of the resin allows customers to easily paint them in any colour and make their parts as realistic as possible. This resin has an ultimate dry touch and smooth finish, which delivers satisfactory customer experience. You will experience the benefits of extremely fast exposure times allowing you to hold the finest details required for jewellery market. The solid material is tough, durable and long lasting provided it is stored in dry conditions away from sunlight.

For use with the Liquid Crystal Precision and Precision 1.5 only.



Daylight Dental Model

Dental Model White polymer has been formulated to create detailed, high resolution dental models on the LC Precision printer range. The resin has been developed in conjunction with Dental Technologists to ensure an optimal colour, feel, and working characteristics. Ideal for Orthodontic, study and working models. The prints show minimal shrinkage with a tolerance of 50µm max deviation on a full arch. Printed dental parts exhibit extremely high tensile properties and hardness, allowing for their use as a working or a vacuum forming model. Dental model resin will provide excellent print performance on the LC Precision printer range, allowing you to print crisp and clean dental models.




Daylight Precision Cast

Precision Cast has been designed for creating high definition castable parts especially for the Precision Printer. The printed parts will display a high accuracy and detail for the use in the modern jewellery market. This product has been formulated to burn evenly to reduce gas pressure in the cast and leave virtually no ash or residues (Please refer to our casting guidelines). The parts printed with this resin will have virtually no expansion. The cast parts will display a smooth surface and a good surface finish.

Key benefits include a reduced ash and residue content in burnout, no expansion when heated, highly accurate printed parts with a good smooth surface finish, highly accurate metal cast parts with a good surface finish.

For use with the Liquid Crystal Precision and Precision 1.5 only.

 Daylight Precision Cast
+ 250ml Photocentric Resin Cleaner



Precision Cast has been designed for creating high definition castable parts especially for the Precision Printer. The printed parts will display a high accuracy and detail for the use in the modern jewellery market. This product has been formulated to burn evenly to reduce gas pressure in the cast and leave virtually no ash or residues (Please refer to our casting guidelines). The parts printed with this resin will have virtually no expansion. The cast parts will display a smooth surface and a good surface finish.

Key benefits include a reduced ash and residue content in burnout, no expansion when heated, highly accurate printed parts with a good smooth surface finish, highly accurate metal cast parts with a good surface finish. Comes with 250ml spray bottle of Photocentric Resin Cleaner

For use with the Liquid Crystal Precision and Precision 1.5 only.

 Daylight Precision Mould



Precision Mould has been designed for creating high definition jewellery parts especially for the Precision Printer. The printed parts will display a high tensile strength, high accuracy and detail for the use in the modern jewellery market. The parts printed with this resin withstand high temperatures (up to 180°C) and pressures required for vulcanizing. Parts printed with the Precision Mould resin are ideal for the use as pattern in high resolution silicon rubber moulds. The printed parts will display a smooth surface and a good surface finish.

Key benefits include high tensile strength, high accuracy, no shape deformation at elevated temperatures, smooth surface, easy to use and finish.

For use with the Liquid Crystal Precision and Precision 1.5 only.

 Daylight Precision Concept



Precision Concept has been designed for creating high definition jewellery parts especially for the Precision Printer. The printed parts will display a high tensile strength and durability, as well as a high accuracy and detail for the use in the modern jewellery market. This resin will allow designers to display highly accurate and detailed jewellery models. In addition, the high print speed of this resin, will allow jewellers to try their designs directly on the customer's hands. The printed parts will display a smooth surface and a good surface finish. Moreover, patterns can be easily painted with an aerobrush.

Key benefits include high tensile strength, high print speed, high accuracy, smooth surface, easy to use and finish.

For use with the Liquid Crystal Precision and Precision 1.5 only.

 Skin Safe Firm



Looking to print things to wear or get younger people more engaged with 3D printing? Our skin safe resin is the way forward. Specially created to ensure that the liquid components do not cause irritation to skin. Solid parts will be rigid, whilst thinner allowing some degree of manipulation before breaking.

Note: Skin safe is non-irritant and non-skin sensitising. If you are already sensitised to acrylates, you may still get irritation from Skin Safe resin.

For use with the Liquid Crystal Precision and Precision 1.5 only.

Resin Ancillaries

 Resin Cleaner



Photocentric Resin Cleaner, the advanced cleaning solution for 3D post processing. Our new cleaner can be used with a variety of different types of resins from our range as well as 3D tools like: platforms, vats and more. Photocentric Resin Cleaner is a quick and highly effective post processing solution that removes non-cured resin from the surface of your models helping them to look their best!

This new cleaner is a safe, non-flammable, low-smell clear liquid also avoids the cloudiness and white marks that IPA causes. You can also use Photocentric Resin Cleaner in an ultrasonic cleaner to increase its lifetime for multiple uses without the need for filtering or refilling.

Liquid Crystal PRECISION 1.5

Ancillaries

LIQUID CRYSTAL PRECISION HOOD

Hood for Liquid Crystal Precision. Useful if your hood gets damaged or as a spare to put over resin or print platform if you cannot wash straight away.



LIQUID CRYSTAL PRECISION PLATFORM

Print platform for Precision printer. Order a spare if you wish to start a new print before cleaning the platform eg. You may have a print that you wish to post expose on the platform.



VAT FILM TAPE

Tape for fixing your vat film when re-skinning the Liquid Crystal Precision vat.



LIQUID CRYSTAL PRECISION SCREEN REPLACEMENT FILM

Replacement film for the Liquid Crystal Precision printer to keep your screen clean from any possible resin spillage.



LIQUID CRYSTAL PRECISION DISPOSABLE VAT X PACK OF 5

New easy to use and tense Vat for Liquid Crystal Precision, suitable for the Liquid Crystal Precision only. Vat is supplied complete with tensioned film ready for use.



PRECISION METAL VAT

Smooth, sleek and simpler to use. The new LC Precision metal vat has been designed as an alternative to the existing disposable vat to make the re-skinning process easier and cheaper, whilst also achieving the perfect film tension every time. It is an ideal addition to Precision and Precision 1.5, making it a perfect step closer to expanding your additive manufacturing line.

Key Benefits include:

- Solid metal design is providing an improved user experience and increased durability
- Twin metal gasket design makes it simpler to re-skin and gain perfect vat film tension every time
- New and sturdier design ensures the usability of the vat film is extended in comparison to using disposable vat
- Less vat film is required, making it cheaper to maintain in the long run
- Smaller surface area makes it easier to store
- Compatible with Precision 1 / Precision 1.5

Please note, this new vat will work on the Precision 1 and Precision 1.5 however if you are printing chunkier models with a larger surface area then the vat will need to be fixed down, we recommend using tape or elastic clamps for this.



Compatible ancillaries

with the LC10, HR & Precision

UV LIGHT EXPOSURE UNIT

4 x 9W bulbs. For post exposure of small Daylight and UV resin printed parts.

Post Exposure Times:

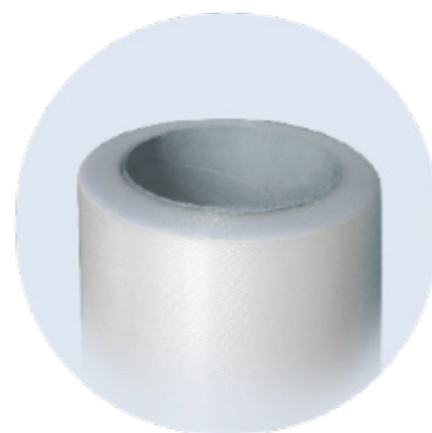
Daylight Resins: 1 Hour

UV Resins: 2 Hours



VAT FILM

10 sheets of vat film for the Liquid Crystal 10", HR or Precision which is specialised low surface energy film, with high clarity and exceptionally low refraction index. Precision vats are disposable but if you wish to reskin your vat, you can order this item and a vat tape roll. 100my FEP



BOX OF 25 FILTERS

Box of 25 filters. Use to filter resin when pouring back into container of origin after use.



PHOTOCENTRIC STUDIO



Photocentric Studio is a complete and comprehensive solution for all users from hobbyists to professionals. Now, Liquid Crystal users have everything readily available in one user-friendly package; where you can prepare and edit 3D files, slice and directly control your machines all from just one software. Photocentric Studio software offers an array of excellent features, including

an extensive variety of support modification and types, fast processing of large heavy files, personal customisation and customer friendly interface, autodetect of critical angles and much, much more. With 1 perpetual license you can operate 2 PC's and never have to renew your license again!

Download Files will be emailed to you once purchased. License number will be sent to you after purchase is confirmed

SOFTWARE FEATURES

- Perpetual license which can be activated on 2 PCs
- Multiple option for support generation
- High quality print surface finish
- Fast processing of large files. Suitable for all applications, from hobbyists to professionals
- Automatic software notifications
- User interface modification
- Auto detect of critical areas for support generation
- Layers preview
- Integrated printer controller
- Slice Preview
- User friendly interface
- Various control options of 3D models (such as orientation, scaling and copying)
- Enable to open stl, obj and p3d files.
- Enable to save in stl, cw and p3d formats.
- Extensive list of keyboard shortcuts to save time
- Anti-aliasing option
- Incorporated instruction guideline within software environment
- Advanced instructions provided in the software

Minimum PC Requirements:

- Windows 7, 8 or 10
- Minimum 2.0 Ghz processor speed 2 cores. Recommended 4 cores
- GPU capable of running opengl version 3.0 or higher
- .net framework version 4.0
- 64bit system: minimum 2 GB of RAM, recommended 4 GB
- 32bit system: minimum 1 GB of RAM, recommended 2 GB

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