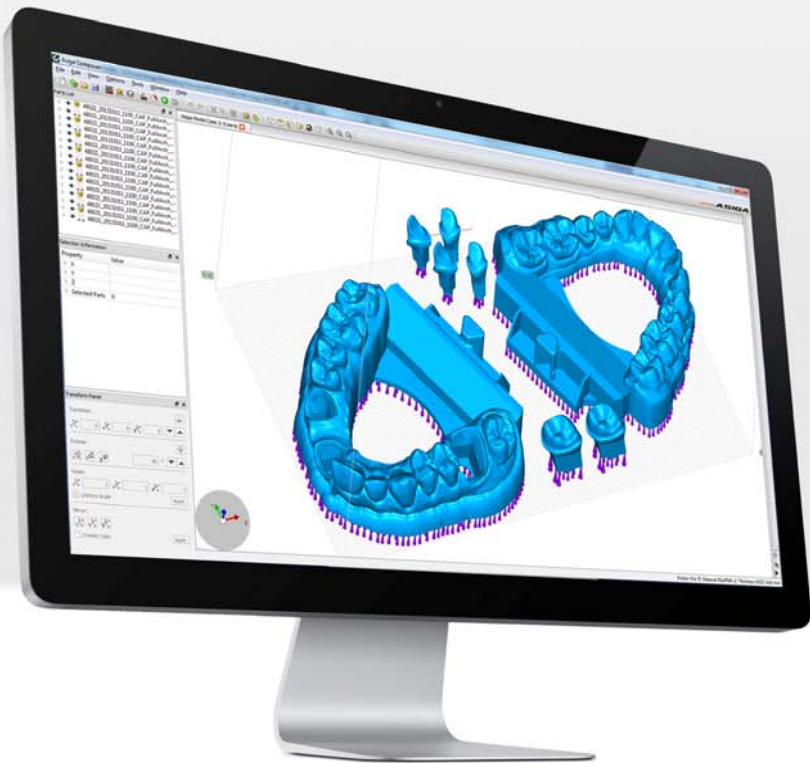


# ASIGA

3D printers for digital dentistry



# Recommended Asiga 3D printer for dental.

## MAX UV



### Printer Specification

Build size X, Y, Z	119 x 67 x 76mm* (4.68 x 2.63 x 3 inches)
Pixel size X,Y	62µm
Z resolution	Variable in 1µm increments
Light source	High-power UV 385nm LED
Material system	Open material system
File inputs	STL, SLC, STM
Software	Asiga Composer (included)
Network compatibility	Wifi, Wireless direct, Ethernet
Industry sectors	Dental Laboratory, Dental Clinic
System size	260 x 380 x 370mm (10.2 x 15 x 14.5 inches)
System weight	16.5Kg (packaged 19Kg)
Packaged size/weight	410 x 500 x 480mm (18.1 x 22 x 19.7 inches)
Power	12VDC 10A

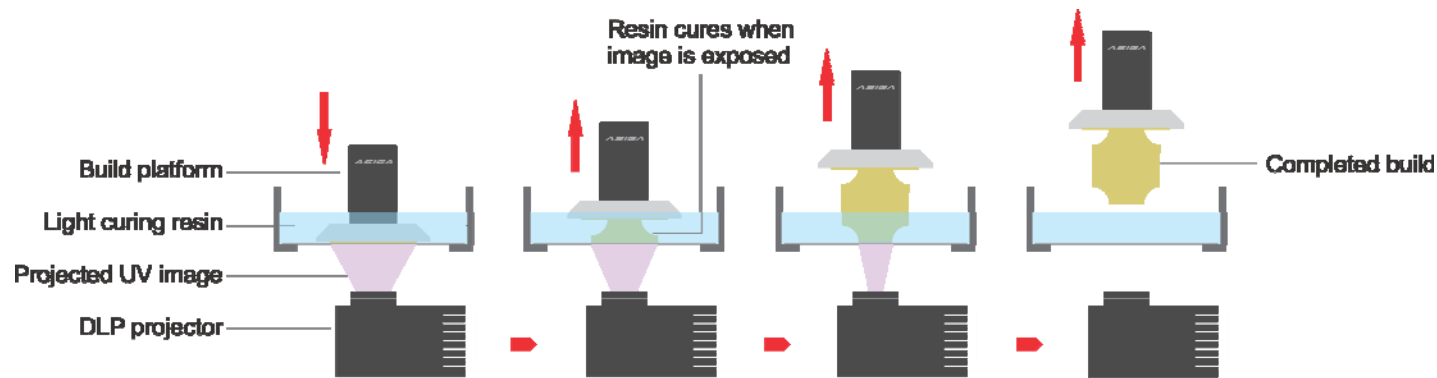
\* build envelope size may vary



# Asiga 3D printers use DLP Technology.

DLP – Direct Light Processing

Asiga's DLP video projectors project images onto a light curable liquid resin. Once the image meets the resin it solidifies and forms a layer. After the layer is formed the printer separates the layer and then approaches for the next layer. The process continues until the object is fully formed.



Benefits of DLP include:

Fixed pixel image which ensures long term stability.

Fast print speeds as the complete layer is projected in one exposure.

UV LED option.

# What makes Asiga 3D printers different.

Asiga 3D printers are proven as best-in-class for digital dentistry and offer the highest accuracy of any commercial 3D printer. This is achieved by Asiga's proprietary **process monitoring technologies** that ensure every layer is formed accurately.

Accurate layer formation is the key to achieving consistently accurate results in a production environment.

# Asiga Process Monitoring technologies.

Smart Positioning System (SPS) technology

-

Integrated Radiometer

-

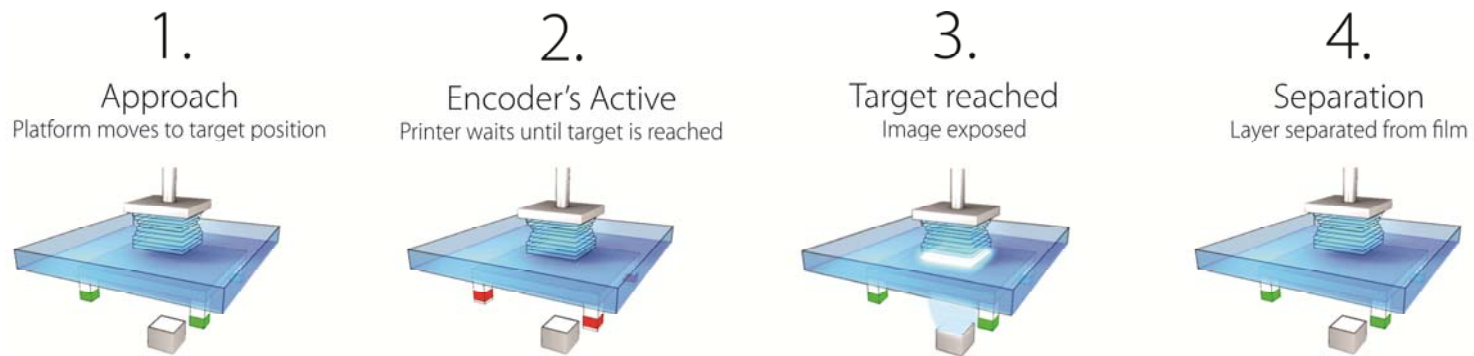
Small pixel size, 62µm

-

Optimised material curing

# Asiga SPS technology

SPS is a series of 4 positioning encoders located around the perimeter of the focal plane (the surface where images are projected). These positioning encoders read the actual location of the build platform ensuring the next layer is only exposed/formed once the platform has reached its target position.



Other 3D printer brands use a 'wait time' which is inaccurate and does not accommodate changes in material viscosity, printer deflection and the cross-sectional area of each layer.

# Integrated radiometer

All Asiga 3D printers have an internal radiometer which monitors actual LED power during every layer exposure. This is important as over time the LED will decrease in power and a decrease in LED power requires additional curing time.

The internal radiometer continuously reads the LED power and the printer adjusts curing times automatically based on actual LED power.

# 62µm pixel

Printing with a small pixel size allows for accurate detail resolution and XY control. A 62µm is suited to both restorative and orthodontic applications.

Note: the printer pixel size is not the sole indicator of accuracy. Accuracy is achieved by combining all our process monitoring technologies together.





# Optimised material curing

Optimised material curing is a critical element to achieving an accurate 3D print. Material characteristics vary widely based on colour, mechanical properties, shrinkage, stability during and after printing and ultimately accuracy.

Asiga material ini files manage a number of material curing behaviours to ensure an accurate result is achieved.

Optimised and accurate Asiga materials:



Dental Models



C&B, Partial Frameworks  
Direct-casting



Ortho Models

# Open Material System

Asiga 3D printers are 100% open which allows for any suitable material to be used. Here are some of our material partners:



## UV LED – 385nm

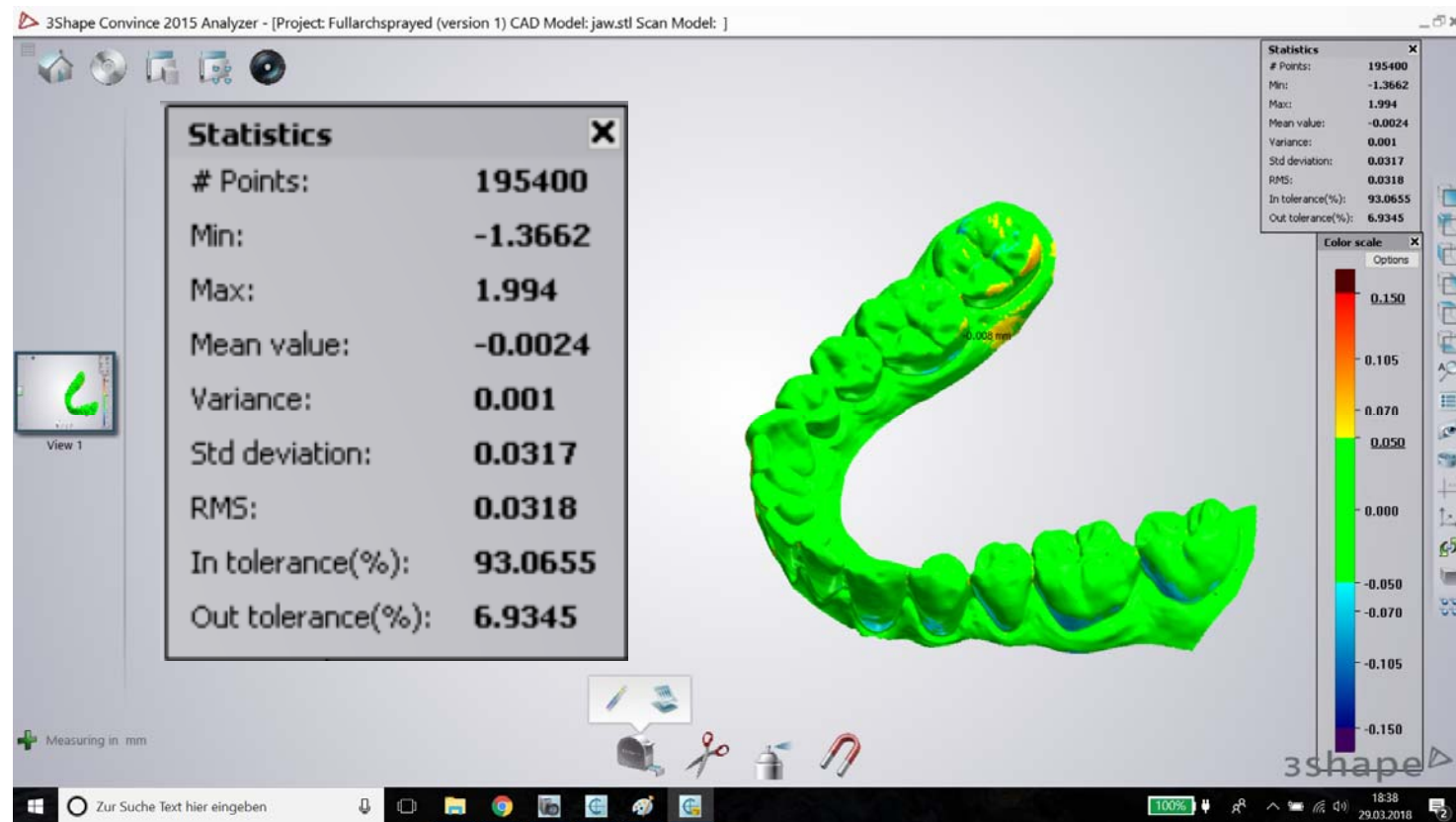
Water-clear materials require a light source in the deeper UV spectrum for effective curing. Asiga UV 3D printers use 385nm LED's which allow for printing water-clear materials. A UV system can also print materials for denture bases, models, guides, trays, C&B, partials, IBT, splints and more.



405nm (visible light) 3D printers require pigments in the material to catch this wavelength of light. For this reason 405nm materials have a blue or yellow tint and water-clear materials are not possible.

# The result - repeatable accuracy.

3D scans of a full arch dental model demonstrate over 93% of data points are within 50µm of the original CAD file with a standard deviation of 31µm.



MAX UV, DentaMODEL resin, 3Shape D scanner, 3Shape Convince software.



# Print speed.

Printing speeds will vary depending on material and dental application. Below is a guide to print speeds on a MAX UV:

	Parts lay flat		Parts standing	
	50µm layers Qty / build time	100µm layers Qty / build time	50µm layers Qty / build time	100µm layers Qty / build time
Dental Model	2-3 parts / 1.5hrs	2-3 parts / 30minutes	-	7-8 parts / 1.5hrs
Surgical Guide	-	2-3 parts / 30minutes	-	6-8 parts / 1.5hrs
Occlusal Splint	-	2-3 parts / 30minutes	-	8-10 parts / 1.5hrs
Crown & Bridge	10-15 parts / 20minutes	-	20-35 parts / 1.5minutes	-
Denture Base	-	2-3 parts / 30minutes	-	7-8 parts / 1.5hrs
Custom Impression tray	-	2 parts / 30minutes	-	4-5 parts / 1.5hrs

\* timings will vary depending on total height of object being printed.

## Software integration.

Compatible and integrated with market leading dental design software.

3shape 

3Shape Implant Studio

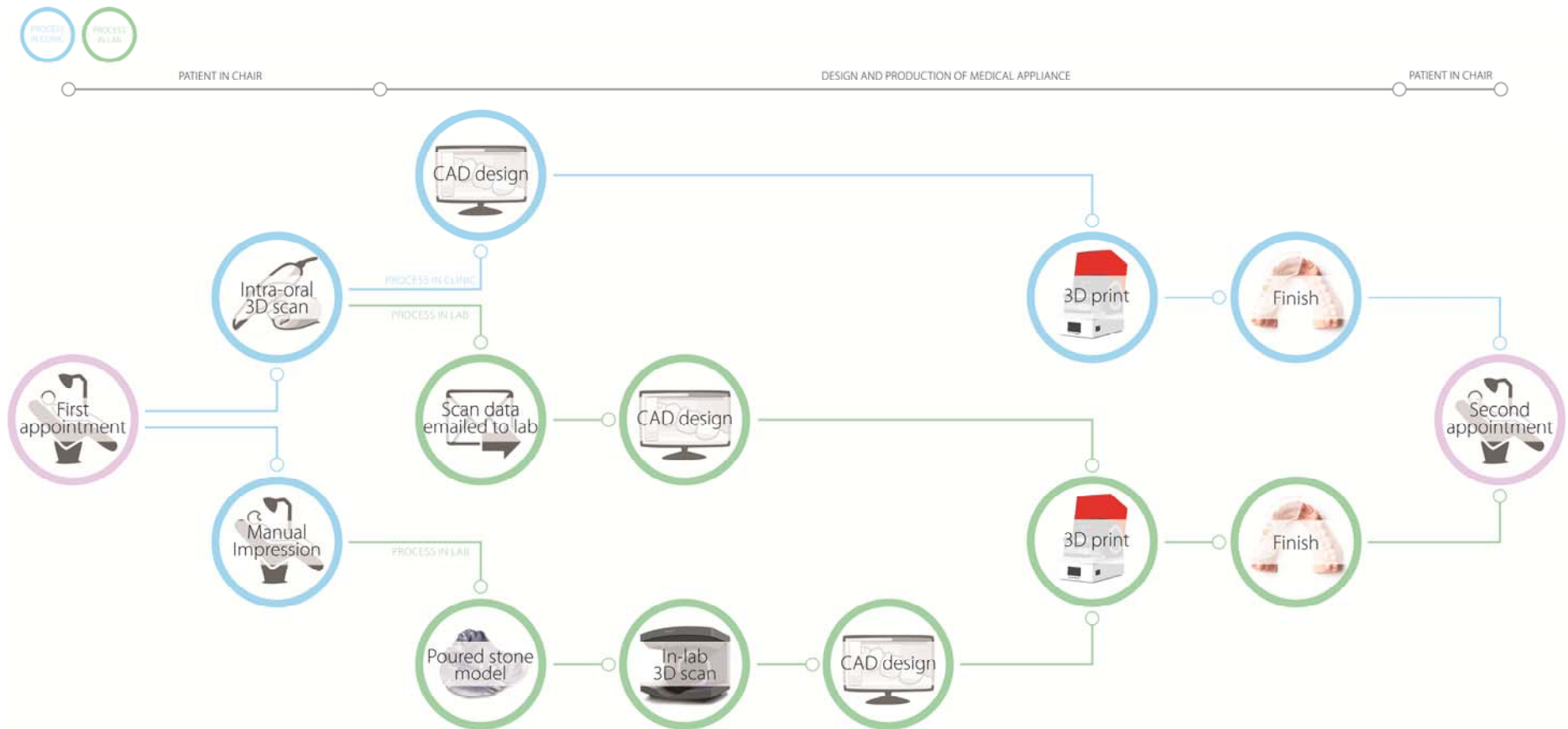
exocad

Integration scheduled for 2019 release



# A digital dental workflow.

Where Asiga 3D printers fit within a digital dental workflow.





# Testimonials.

What some of our customers say.



"Asiga's high quality and reliability make it a great option for the lab."

Christopher Kirkland, R&D Technical Analyst, Glidewell Laboratories



"After extensive internal testing of a variety of 3D printing systems, the ASIGA MAX UV is clearly one of the best desktop 3D printers in terms of print quality and consistency for the tested dental indications."

Alex Pilet, Head of Advanced Technologies, Nobel Biocare



"We use the Asiga MAX UV as it offers a completely open material system that allows us to utilise resins from almost any vendor."

Brad Race, Owner, Race Dental



"The MAX UV gave us the highest and most reliable quality in 3D printing we have seen with outstanding tech support and at a cost that we could compete with any competitor."

Grant Davis, CEO, Davis Advanced Dental Prosthetics



"Asiga 3D printers have proven to produce very high quality models and their DLP technology allows the use of many compatible third party materials including Detax, Dreve, Pro3dure and Whip Mix."

David Rodwell, Owner, Rodwell Orthodontic Laboratory

## What's included.

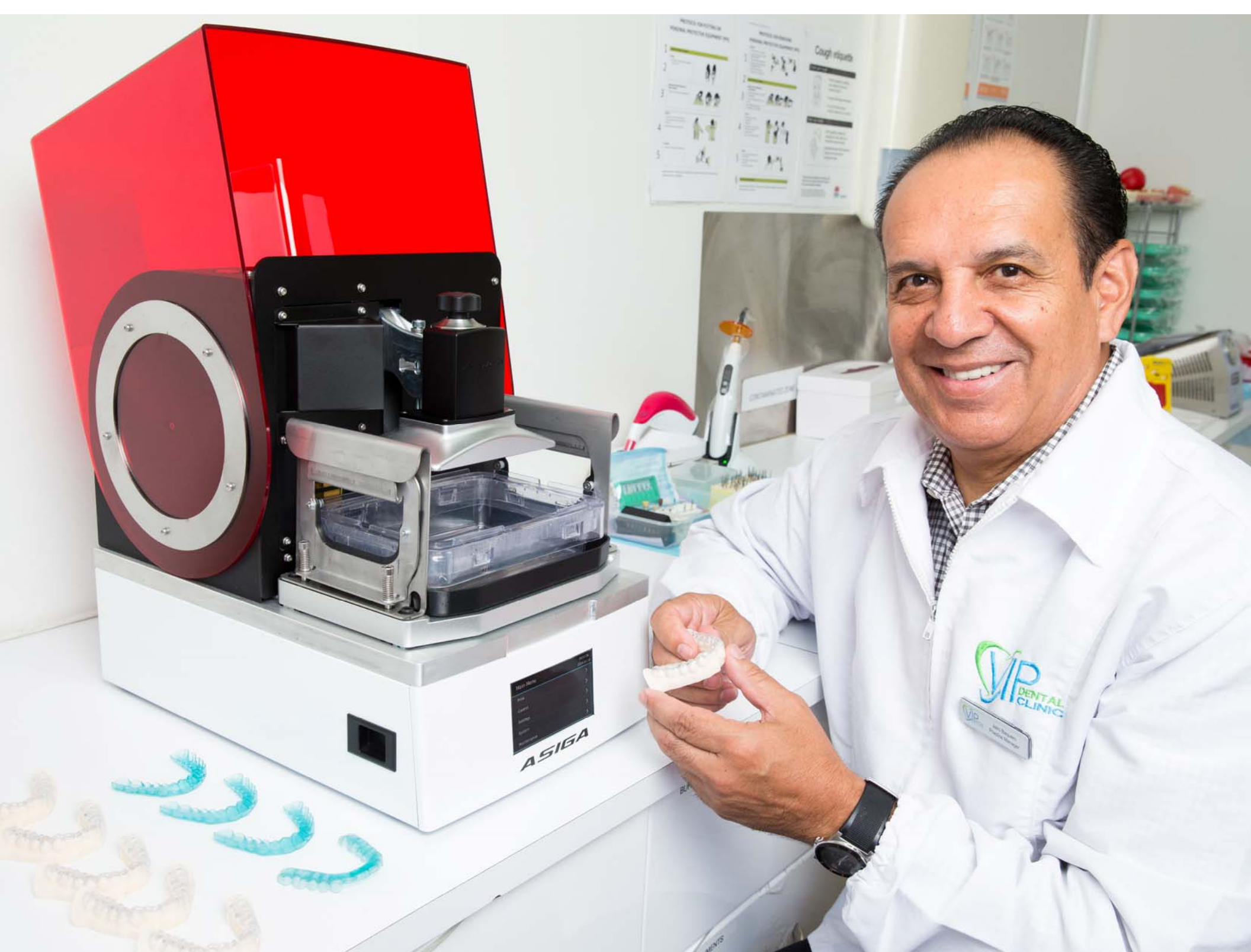
Asiga 3D printers are supplied as a package so customers can start printing out of the box. The package includes:

- 3D printer
- Composer Software (Open license)
- Asiga material sample pack
- Calibration Toolkit
- Curing chamber
- 12 months warranty
- Unlimited lifetime technical support

# Who is Asiga.

Asiga is an Australian manufacturer of DLP 3D printers, 3D materials and software with our head-office in Sydney, Australia. All product development, product assembly, accounts and marketing is managed via our Sydney office. Asiga Europe is a technical office in Erfurt Germany which provides technical support throughout Europe.







# ***ASIGA***

## **Asiga Head Office**

2, 19-21 Bourke Road  
Alexandria, NSW 2015  
Australia.

Tel: +61 2 9690 2737

## **Asiga Europe**

Krämpferstraße 4  
99084 Erfurt  
Germany

Tel: +49 361 5506 6866

US toll free: +1 877-689 99 98

[info@asiga.com](mailto:info@asiga.com)

[www.asiga.com/](http://www.asiga.com/)