

KEYENCE

NEW High-resolution 3D Printer
AGILISTA-3000 Series

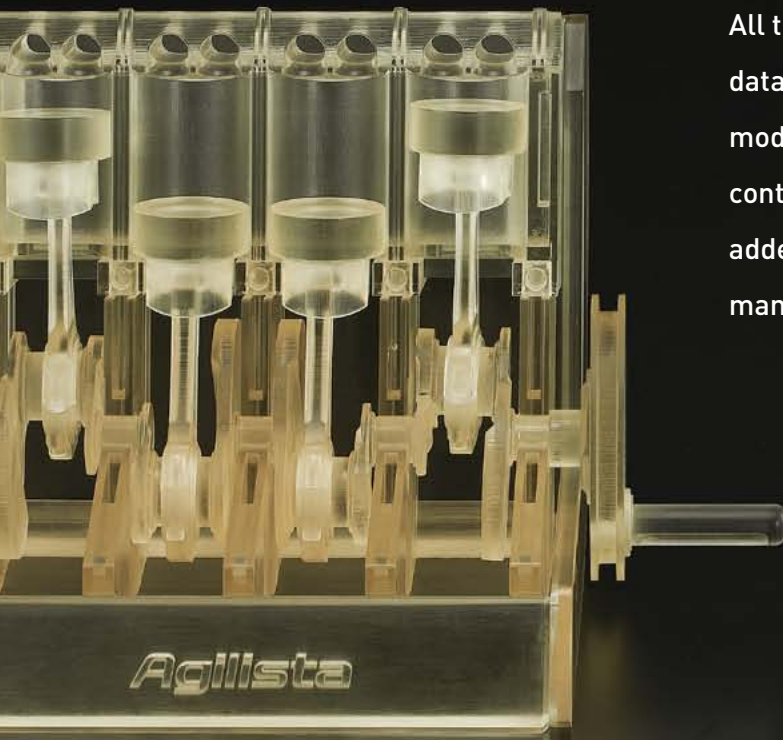


**HIGH-RESOLUTION 3D PRINTER
EASY-TO-USE**

Agilista



TOWARD HIGHLY-PRODUCTIVE DESIGN AND MANUFACTURING



All the 3D printer needs is the 3D CAD data and a few hours to produce precise models and prototypes. 3D printers contribute greatly to time reductions and added value enhancements in design and manufacturing.



Agilista

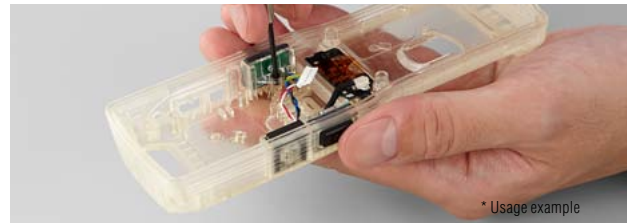
DESIGN

Ideas can be given form immediately, which leads to quick decision making.



CONCEPT

The design can be printed and evaluated in a short time, which reduces the amount of rework in the final stage of prototyping.



* Usage example

PROTOTYPING

It enables the user to check the appearance of prototypes, but also verify functions, which makes it possible to reduce the number of outsourced prototypes, saving many days required for outsourcing.



* Usage example

MANUFACTURING

Manufacturing tools can be produced in-house, which leads to cost reduction. Sudden change of the equipment can also be supported instantly.



* Usage example

SALES

Professional mock-ups can be prepared in order to give suggestions to customers. The AGILISTA is the ideal device to create tools for attractive sales promotions.



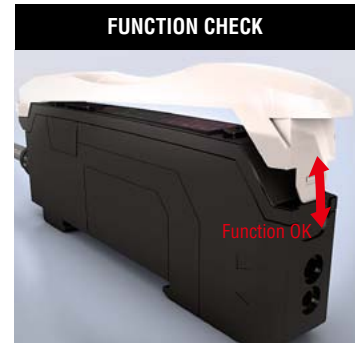
* Usage example

HIGH-RESOLUTION AND EASY-TO-USE, 3D PRINTER THAT MEETS THE USER'S IDEAL

3D PRINTER REQUIREMENTS

PRINTING WITH EVEN HIGHER PRECISION

If micro-components and moving parts can be modeled, it becomes possible to check the assembly of different parts and also to perform very detailed evaluations. It requires high-precision models close to the final product.



EASIER SUPPORT REMOVAL

If supports can be removed from models easily, the amount of time spent on modeling can be reduced. What's more, if supports can be removed from even complex shapes without damaging the model, the range of evaluations expands.



EASY INSTALLATION

If the 3D printer can be installed without any need of construction or peripheral equipment, the installation can be performed easily.



There's a strong desire to avoid construction work such as water supply piping required for support removal.

THE AGILISTA'S SOLUTION

HIGH-RESOLUTION PRINTING

15 μm PRINT RESOLUTION

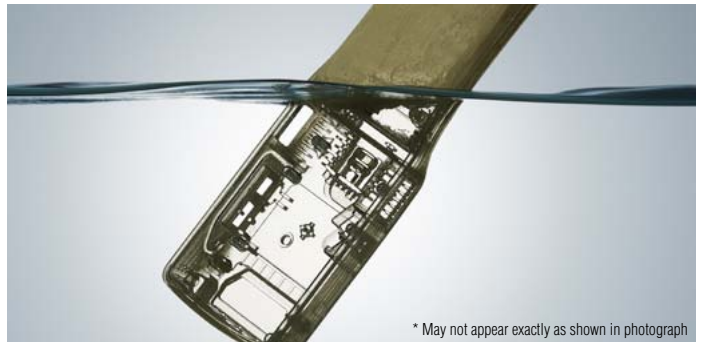
The AGILISTA achieves high-resolution printing through inkjet technology. This means that the AGILISTA is not limited just to design checks. It can also support a wide range of applications such as assembly capability checks and functionality checks.



EASY REMOVAL OF SUPPORT MATERIAL

WATER-SOLUBLE SUPPORT

Support material can even be removed from multiple models at the same time simply by soaking them into water. There is no need to apply unnecessary force to remove the support material. This reduces the risk of damaging the models.



EASY INSTALLATION

NO CONSTRUCTION REQUIRED

The AGILISTA can be installed easily without any need for construction or peripheral equipment. The AGILISTA can be used easily just like a general network printer.



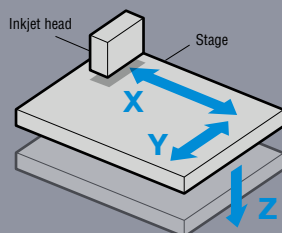
15 μm PRINT RESOLUTION

Inkjet technology enables high-resolution printing



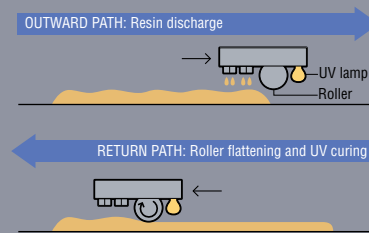
1. The head moves on top of the stage in the X and Y directions.
2. UV curable resin (model material/support material) is discharged according to the shape of the data.
3. The resin is cured by way of the UV lamp on the side of the head.

HEAD AND STAGE MOVEMENT



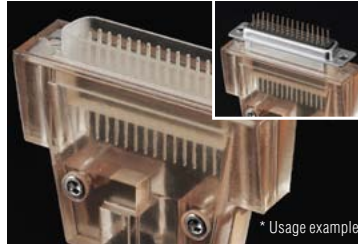
The head moves in the X and Y directions, and then the stage lowers in the Z direction.

PRINTING PRINCIPLE

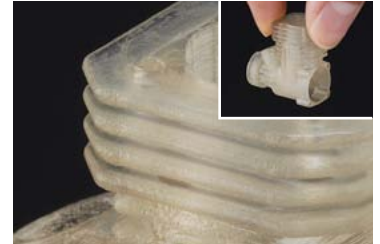


HIGH-RESOLUTION ACHIEVED BY 15 μm PRINT RESOLUTION

To perform accurate evaluations, accurate (high-resolution) printing is necessary. This enables it to accurately reproduce even detailed parts.



Connector component



Motor component



Rose



Intricate shape

TRANSPARENT MATERIAL MODELING

With an opaque model, the internal structure cannot be visually checked when the model is assembled. The AGILISTA uses transparent material, so items such as the presence of clearance and the sealability of packing can be checked visually. Of course, painting the material provides an outer appearance close to that of the finished product.



Part packaging



Painted



Cable routing check

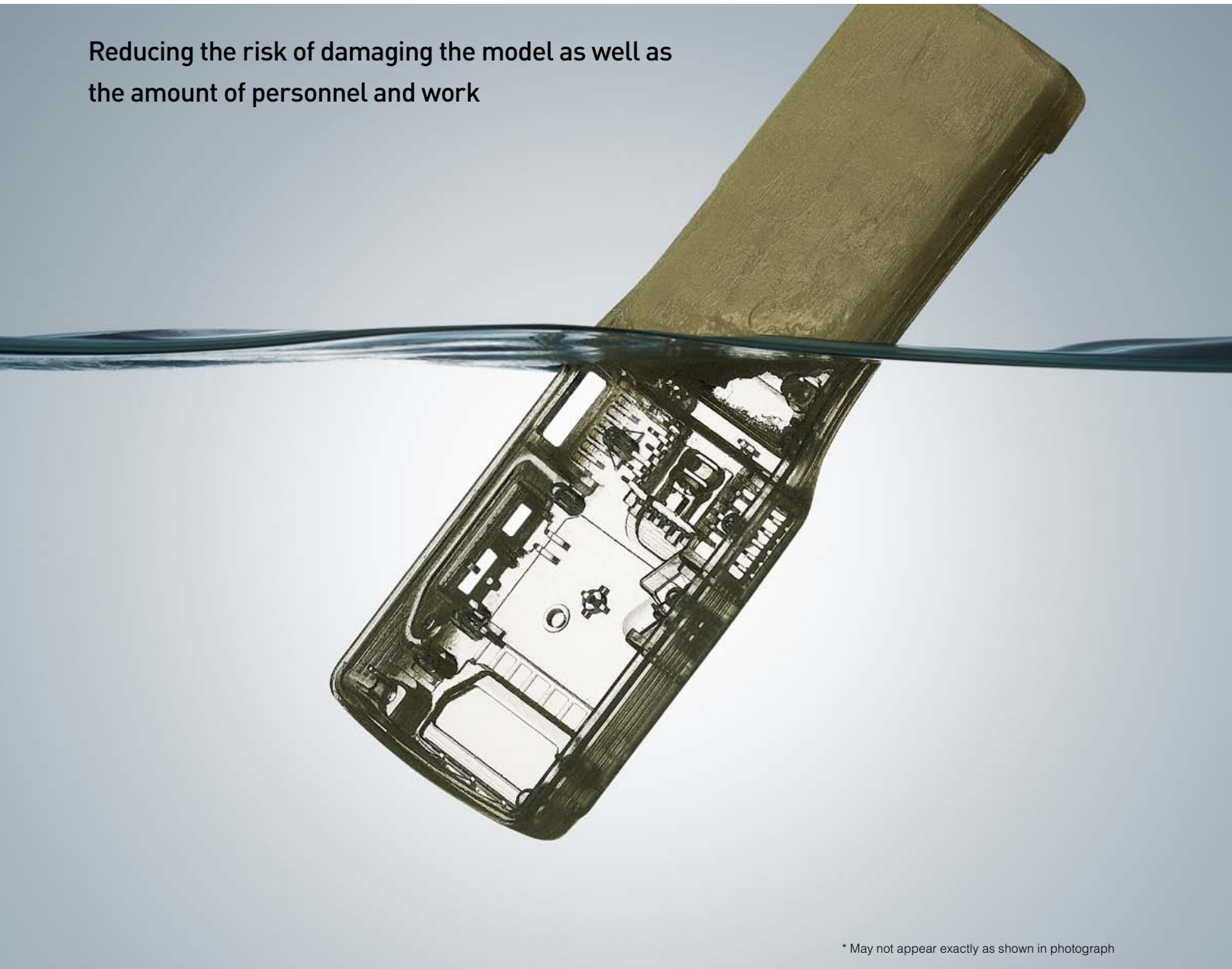


Packing seal status check

EASY REMOVAL OF SUPPORT MATERIAL

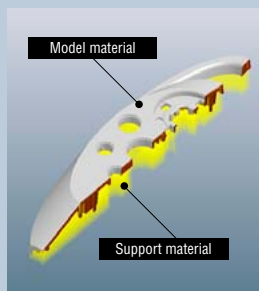
WATER-SOLUBLE SUPPORT

Reducing the risk of damaging the model as well as the amount of personnel and work



* May not appear exactly as shown in photograph

The AGILISTA uses two types of resin to perform printing: The model material, which builds up the model itself, and the support material, which builds up the parts that support the shape. The shape is created with model material while the empty parts are supported with support material. Therefore, removing the support material of the empty parts leaves the completed model.



LESS RISK OF DAMAGE TO DELICATE MODELS

The support material can be removed easily simply by soaking models in water. No water jet by the cleaner or other tools are required to perform this process. No unnecessary force or heat is applied to models, which reduces the risk of damage to models. The result is delicate and high-resolution models with little non-removed support material even when the shape is complicated.



Example of a damaged model



Example of the same model with the support material removed by soaking the model in water



The support material can be removed easily just by soaking the model into water even for assembly parts and complex shapes.

COST REDUCTION IN POST PROCESSING

Not only the risk of damaging the model is presented by removing the support material, but someone must be assigned to do this work as well. With the AGILISTA, support material of several models can even be removed at the same time simply by soaking them into water. This leads to high reductions in labour costs stemming from post processing.



labour costs result when the removal of support material is performed manually.



labour costs can be decreased when the support material is removed by soaking models in water.

Simulation of the time and costs attributable to the removal of the support material

TIME SPENT TO REMOVE SUPPORT MATERIAL PER MODEL (Example) 2 hours	×	CHARGE (HOURLY WAGE) 50 Euro	=	COST INCURRED TO REMOVE SUPPORT MATERIAL PER MODEL 100 Euro

EXPENSES TO REMOVE SUPPORT MATERIAL PER MODEL (Example) 100 Euro	×	NUMBER OF TIMES MODELS ARE PRODUCED IN ONE YEAR 200 times	=	COST INCURRED TO REMOVE SUPPORT MATERIAL PER YEAR 20000 Euro

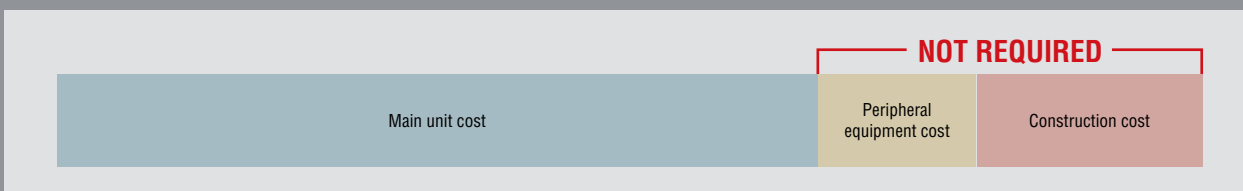
EASY INSTALLATION

NO CONSTRUCTION REQUIRED

The AGILISTA achieves immediate designing, printing, and evaluation.

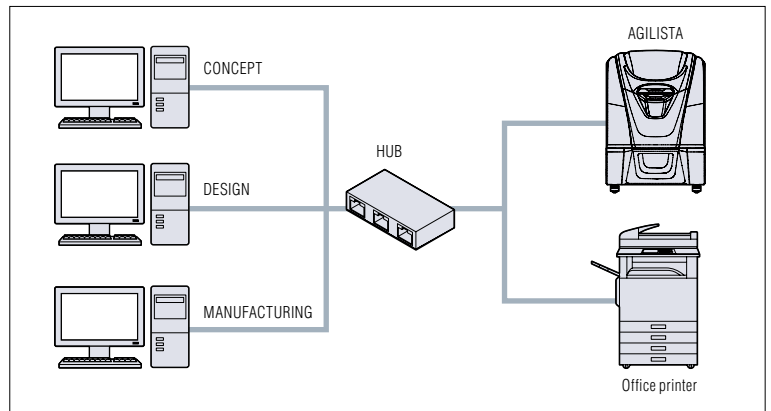


Installing the AGILISTA



SIMPLE DATA TRANSMISSION

In a LAN environment, data can be transmitted from multiple computers to the AGILISTA, just like a network printer. This enables users to perform printing in the same manner as they send documents to a printer from their desks.



NO NEED FOR MACHINERY OR INSTALLATION CONSTRUCTION

The AGILISTA does not require any piping construction or peripheral equipment such as ultrasonic cleaners and constant temperature baths, which leads to savings in terms of the costs, work, and space that would otherwise be required.



No construction required



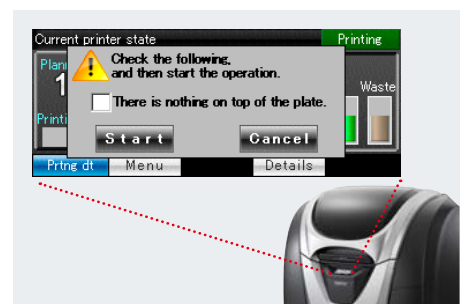
No peripheral equipment required

USER-FRIENDLY

The material is contained in cartridges and operations are performed using the interactive touch panel. Everyone can easily use the AGILISTA.



Easy replacement

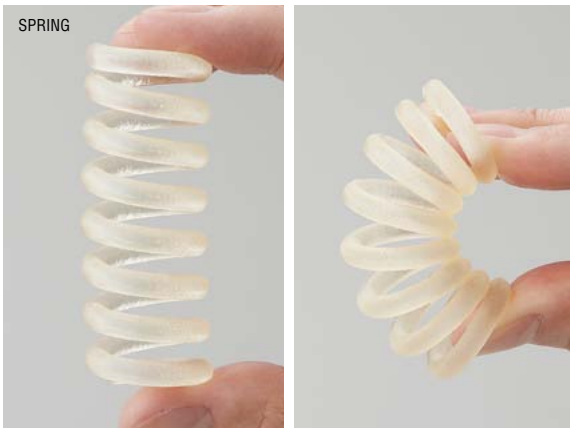


Interactive colour touch panel

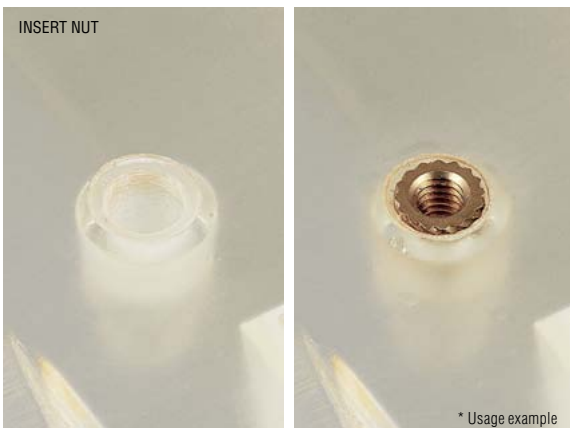
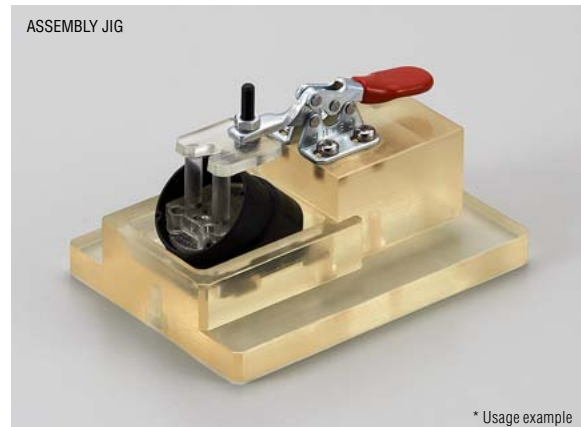
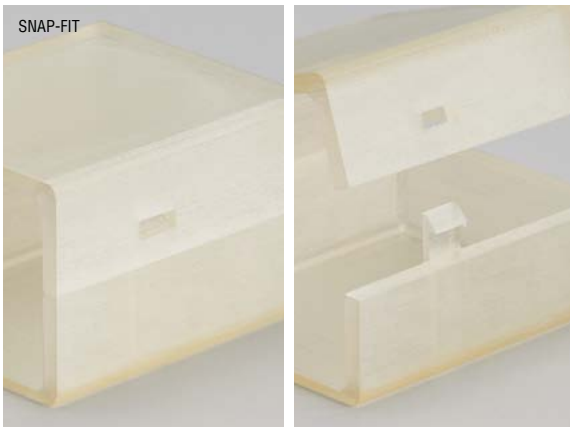
CHARACTERISTICS OF MATERIAL

The designed material for use with the AGILISTA has characteristics that are useful in the evaluation of models. High-resolution printing expand the range of evaluations and the four characteristics of this model enable it to be used in a variety of applications.

TOUGHNESS



STIFFNESS

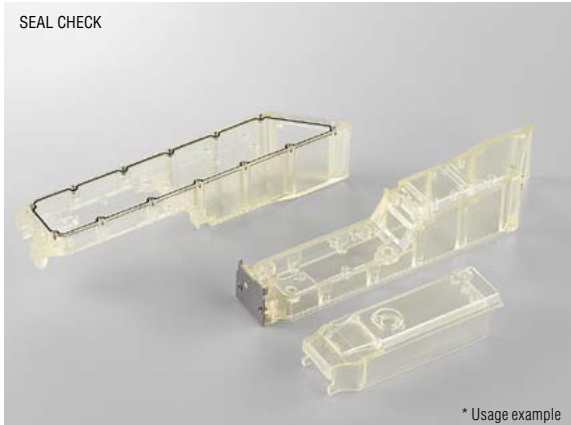


By making use of the toughness of the material, the material can be used to evaluate springs and snap-fits. After printing, insert nut processing or screw threading can be performed.

The material can be used as a jig in fixing and assembly tools at manufacturing sites. For thick models, the material can also be used in prototype moulds.

TRANSPARENCY

SEAL CHECK



PART PACKAGING



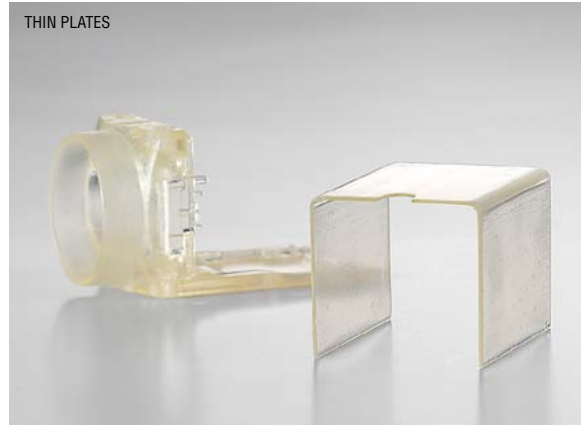
ASSEMBLY CHECK



By making use of the transparency of the material, it is possible to check the interior of assembled parts. Because the material is transparent, it can be painted to match the design.

DURABILITY

THIN PLATES



SPIKY EDGES



DRAGONFLY



Regardless of whether the material is used to make a thin or thick part, its shape will be retained for a long time.

MODELING STUDIO

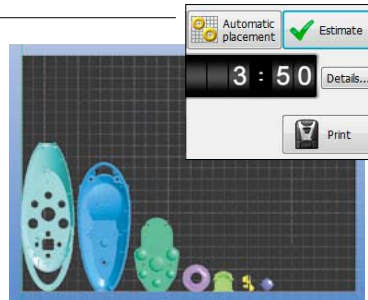


Equipped with Auto and Manual modes

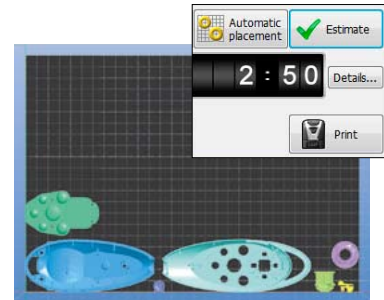
The user can select from Auto mode — in which the posture, positioning, and other similar model settings are configured automatically — and Manual mode — in which the user can configure detailed settings.

OPTIMUM POSITIONING

With one click, the data acquired by Modeling Studio is positioned to the optimum posture and location. This shortens the printing time and reduces the amount of material used.



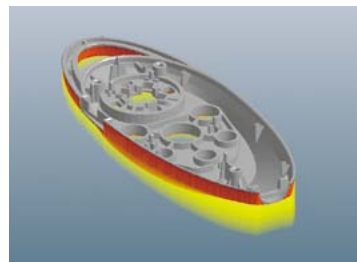
Before optimum positioning



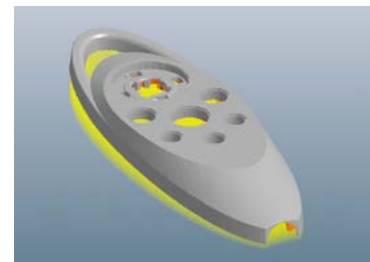
After optimum positioning

SUPPORT POSITION ADJUSTMENT

While checking the position at which support material will be affixed, the user can make fine adjustments to the model angle to be used during printing. This is useful in making fine adjustments to the surface status of the model.



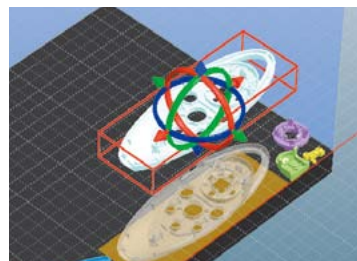
Positioning of surface support material



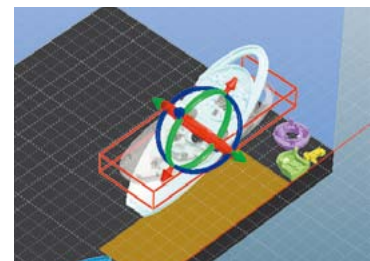
Positioning of underside support material

TANGIBLE RING

This ring can be used to adjust the position and posture of the data intuitively. This function is used to make fine adjustments to the data after optimum positioning is performed. With just one click, the parts of the data can be moved to the point where they very nearly interfere with each other.



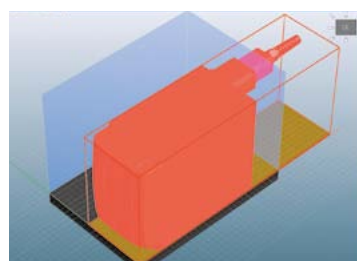
Move



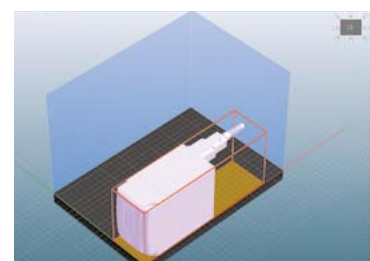
Rotation

SCALING FUNCTION

The data can be expanded and shrunk to an arbitrary size. This function is used to scale down large data that does not fit in the area and to scale up small data whose details are difficult to check.



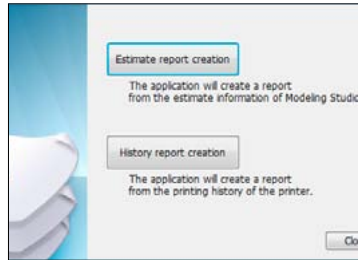
Full-scale (100%)



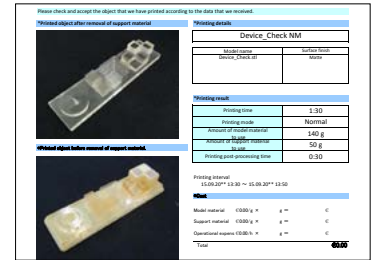
Scaled-down size (60%)

REPORT CREATING FUNCTION

Reports can be simply created from the printing history and estimate information. Microsoft Excel® can be used to freely edit the layout of the reports.



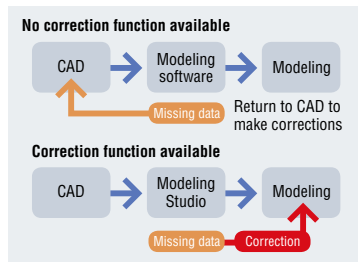
Condition selection



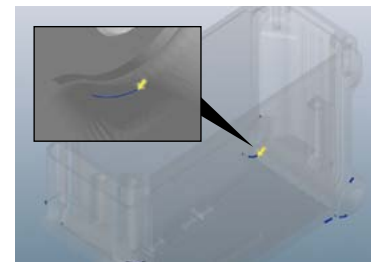
Report creation

STL DATA CORRECTION FUNCTION

Missing data that occurs during STL conversion can be automatically corrected by Modeling Studio, and printing can then be started with the corrected data. This eliminates the troublesome work of repeatedly searching for the missing parts and using CAD software to correct them.



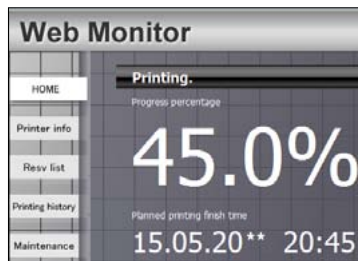
Even if data is missing, it can be corrected by Modeling Studio, and then modeling can proceed.
* Not all missing data can be corrected.



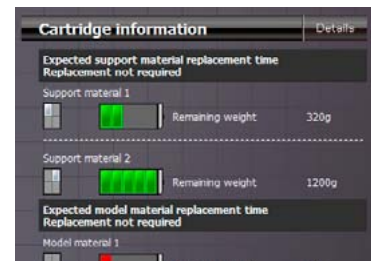
Checking the missing data

WEB MONITOR

A variety of information such as printing progress, the amount of material remaining and maintenance information can be monitored on a web browser. The reservation list can be used to check persons who have made requests, which makes it possible to smoothly make schedule adjustments and send modeling completion notifications.



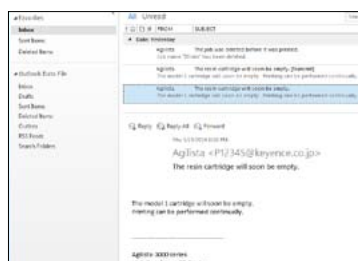
Checking the progress



Checking the remaining material

EMAIL NOTIFICATIONS

Notifications can be sent by email when printing is finished, when material cartridges need to be replaced, and for other similar conditions. Together with the web monitor, this function makes it possible to perform efficient modeling by fully understanding the operation status of the AGILISTA.



Receiving a printing finished email



Checking the next reservation

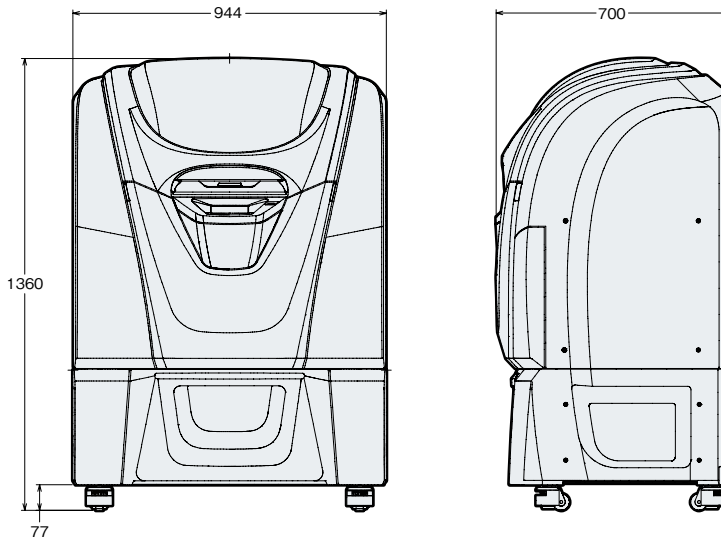
SPECIFICATIONS

Model		AGILISTA-3100W
Build Size		297 × 210 × 200 mm (DIN A4 size × 200 mm)
Resolution		635 × 400 dpi
Layer Thickness	High resolution	15 μm
	Normal resolution	20 μm
Model material		AR-M2 (Transparent resin)
Support material		AR-S1 (Water-soluble resin)
Dimensions		W944 × D700 × H1360 mm
Weight		188 kg
Ambient operating temperature		18 to 25°C
Ambient operating humidity		30 to 70%RH
Power supply	Power supply voltage	AC100-240V 50/60Hz
	Power consumption	Max.750VA
Interface	Ethernet	10BASE-T/100BASE-TX
	Operation	colour liquid crystal touch panel
Software	Name	Modeling Studio, modeling data operation software
	Model	AGILISTA-H1-DVD
	Supported operating system	Windows 8.1 64/32bit Windows 8 64/32bit Windows 7 64/32 bit Windows Vista 64/32 bit
Input data file format		STL file

* Windows is a trademark or registered trademark of Microsoft Corporation in the United States and other countries.

DIMENSIONS

Unit: mm



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0800-KEYENCE
für Anrufe aus dem Ausland wählen Sie bitte: +49 (0) 61 02 36 89-0

www.keyence.de
E-mail : info@keyence.de



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KEYENCE DEUTSCHLAND GmbH

Zentrale für Deutschland Siemensstraße 1, 63263 Neu-Isenburg, Germany

Tel: +49 (0) 61 02 36 89-0 Fax: +49 (0) 61 02 36 89-100

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