S O L U T I O N

Digitized Mass Production Workshop Solution for Jewelry

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WaxJet 400

Digitized Mass Production Workshop Solution for Jewelry
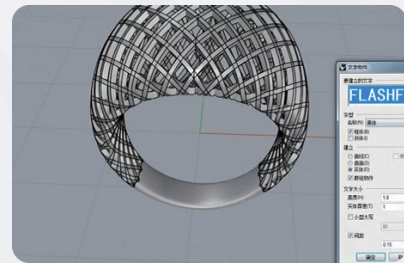
Based on the long-term research and practice of various jewelry production processes, our digitized mass production workshop solution for jewelry deeply utilizes multi-jet 3D printing technology and realizes efficient moldless mass production from designing 3D data to casting wax patterns, facing the batch proofing of jewelry studios and mass-production scenarios of jewelry factories.

It reduces the average delivery time from 12 days to 5 days and reduces the comprehensive cost by 30% on average, while ensuring the stability and consistency of quality. It has successfully assisted a large number of domestic and foreign jewelry producers to effectively improve the production capacity and profit level, and has helped the digitalization and intelligent transformation of jewelry processing industry.

CONTENTS

Digital empowerment, bringing process transformation & high productivity

Why choose digital technology?

Production on Demand

The personalized data, even one single piece, can also be arranged for production. The flexible production reduces the overall manufacturing cost by 20%.

Moldless Manufacturing

It saves the cost of mold-making and retouching and shortens the time to market by 2/3.

Global Leader in Productivity

Output of 10KG wax patterns can be realized by a single device in a single month.

High Precision

The industrial-grade printhead and 1um-grade motion control perfectly present the creativity and details.

01 Prepare the model data

02 Send the model data to the printer

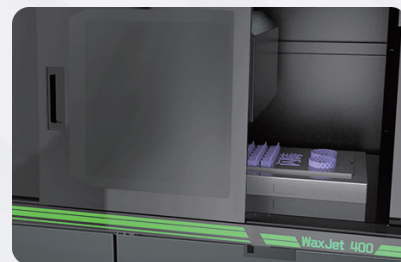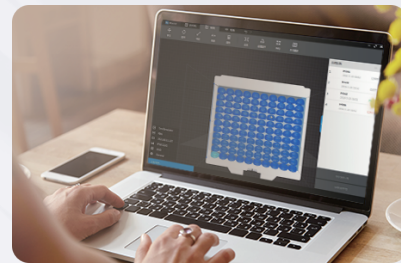**03** Click on the screen to print, unattended printing finished

04 Open the door and take out the plate

05 Remove the wax patterns on the constant temperature heating platform

06 Dissolve the support wax in the wax washing solution

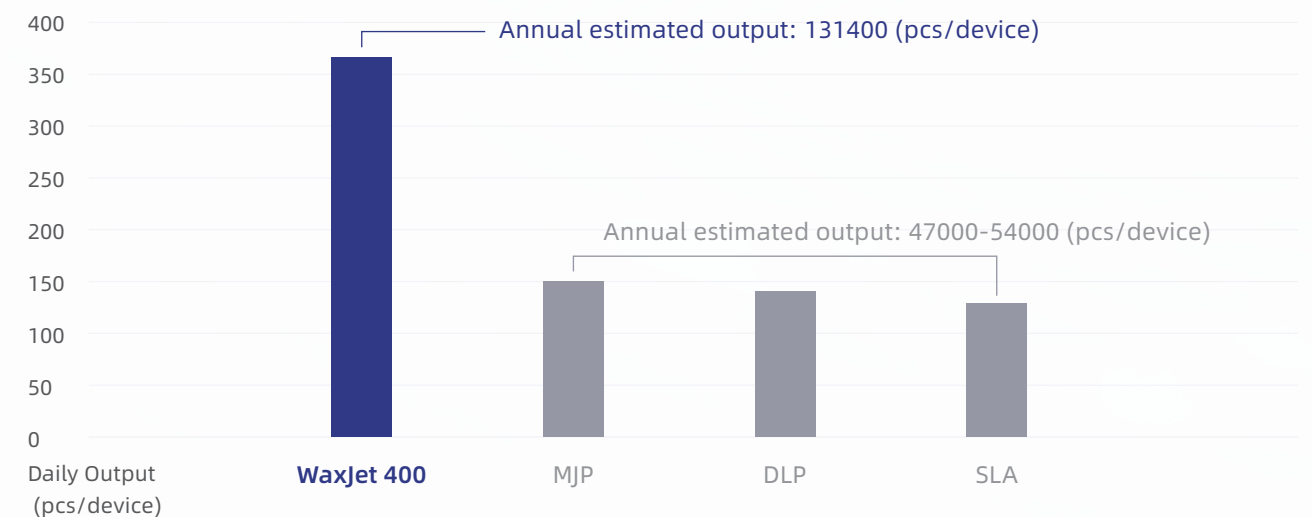**07** Obtain the wax patterns

Production and Time Cost Comparison of 3D Printing Process

Take the ring model (size: 25*18.8*33.6mm) as an example

- ■ WaxJet 400's Technology Level
- ■ Current Industry Level

Annual estimated output: 131400 (pcs/device)

Annual estimated output: 47000-54000 (pcs/device)

400
350
300
250
200
150
100
50
0

Daily Output (pcs/device)

WaxJet 400   MJP   DLP   SLA
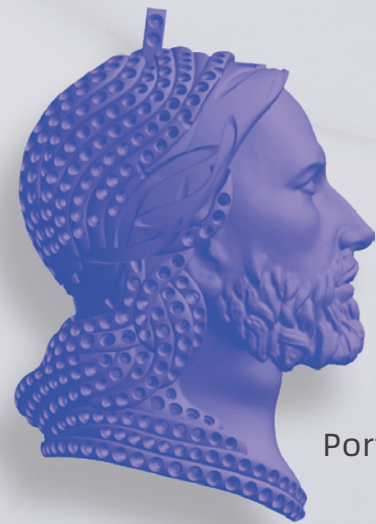
Portrait

Thorns

Bracelet

Tiger pendant

Vase

Ring

Ring

Small pendant

Big pendant

Ruyi

Easy to use, equipped with exclusive pre-sales training
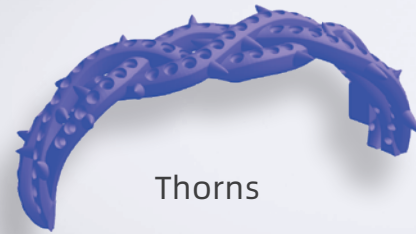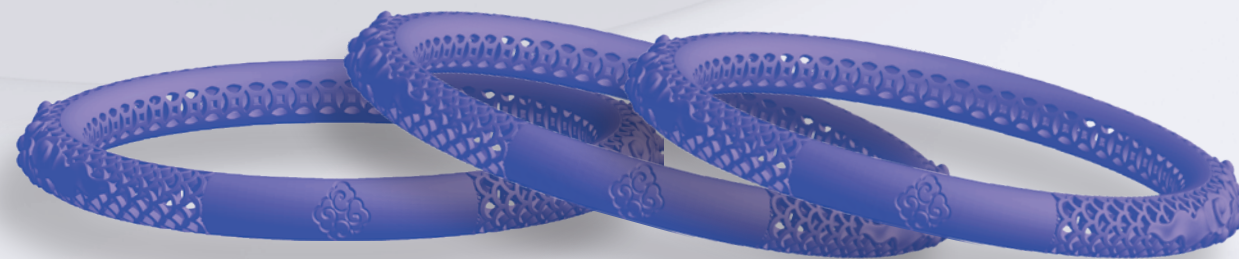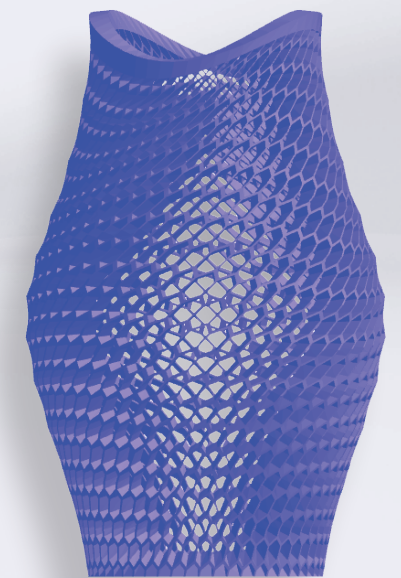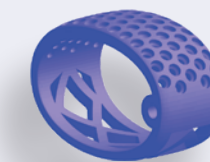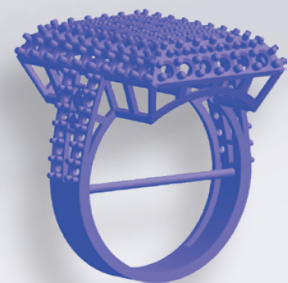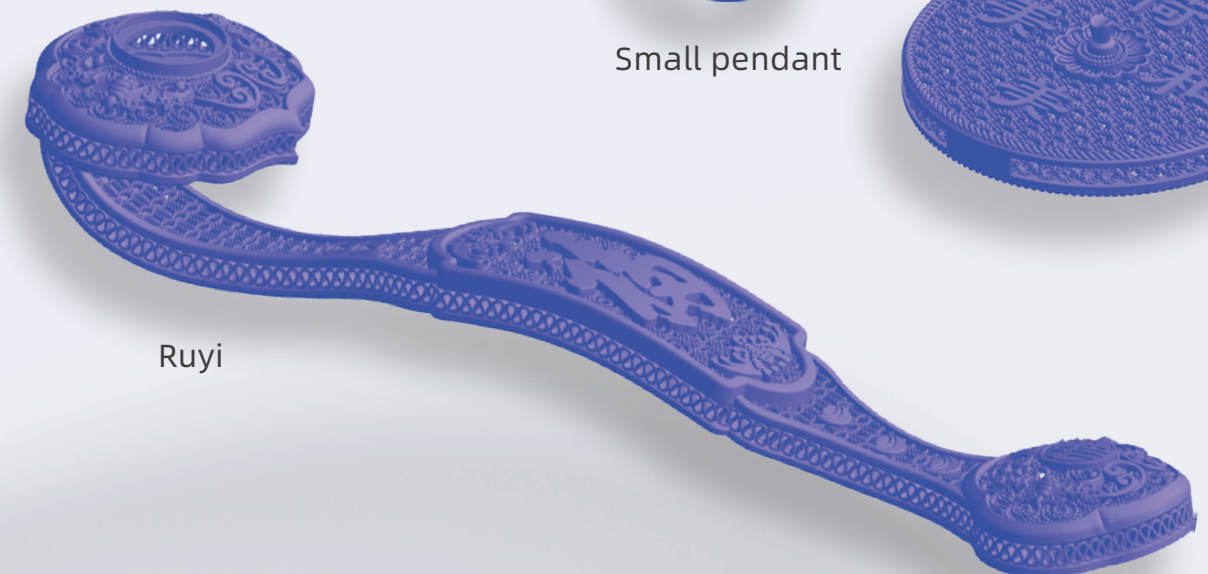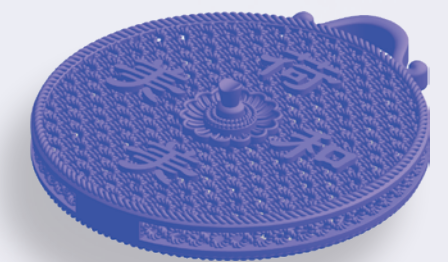
WaxJet 400

A large-size and high-precision multi-jet wax 3D printer

Interface

One-button Automatic Printing

Import the model data via WaxJetprint. Find the file data in the print queue and click the "Print" button. The system will automatically complete printing the model.

Build Plate

3D Automatic Layout

Import in batch, customize the attributes, and select the area and height for automatic layout. The automatic 3D layout function selects the optimal solution through preset iteration times.

Machine Program

Maintenance Plan

The maintenance plan is pre-installed in the equipment. According to the hours of use of spare parts, it will prompt the user to maintain the equipment in order to keep the equipment in good running condition.

Material Chamber

Automatic Reloading

2*2 material cartridge configuration; When one bottle of material is used up, it will automatically switch to another bottle.

04 One-click printing, offering accurate restoration of details

Branded screw rod motor

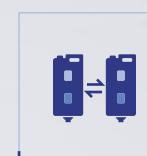It adopts the finishing rolling process and is equipped with Kerk nuts to eliminate the movement clearance, which ensures the 0.015mm guide accuracy and movement stability of the three axes.

Stable-output piezoelectric printhead

The maximum working temperature up to 130℃, the high-speed integrated circuit, and the highest ignition frequency up to 43KHz ensure that the nozzle continuously outputs round and full ink drops.

Self-developed 1um motion control

Based on the FOC motion algorithm, it can guarantee the three-axis 1um reciprocating positioning accuracy and offer adjustable speed control, realizing stable output of high-precision models.

Ultra-quiet guide rail

The double dustproof metal scrapers ensure the 1um travel accuracy of three axes and a long service life.
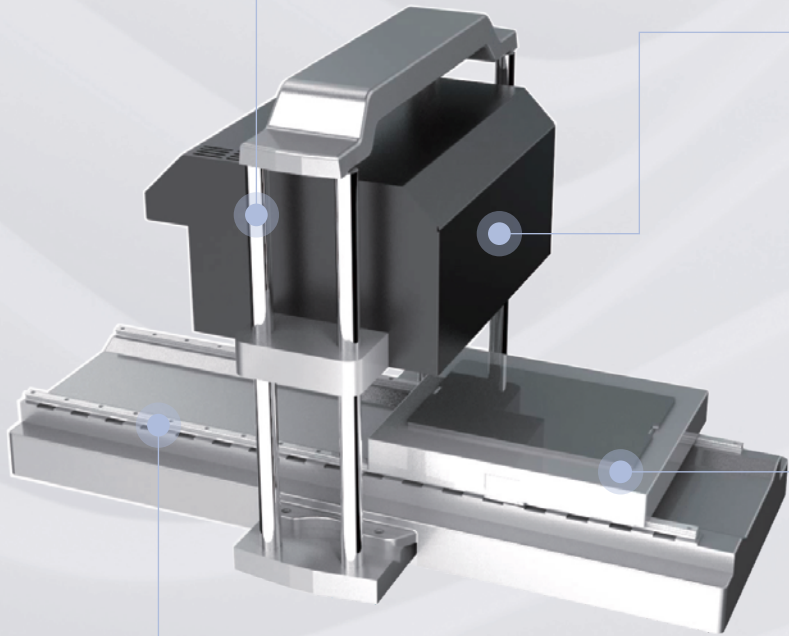
05 Comprehensive support for one-stop services

Software - WaxJetPrint
An all-in-one software suitable for additive manufacturing

Fully automatic equipment connection Multiple machines configurable in one station

Intelligent AI assistant Efficient stacking and layout of 3D models

Exclusive to the jewelry field Equipped with diagnostic and repair functions

Embedded scheduling and reporting system Data-driven business growth

Material Package
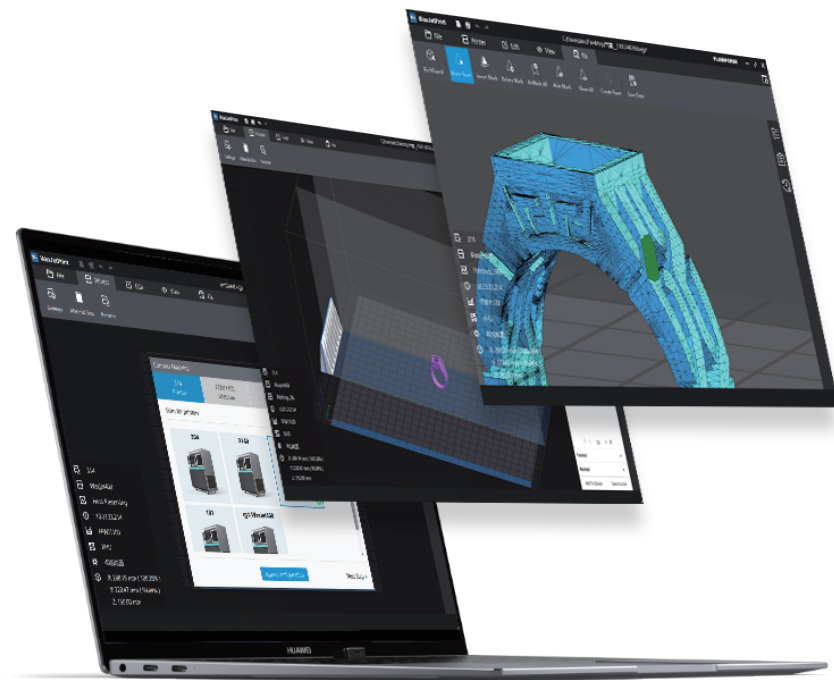Special wax material for wax 3D printer:
Purple wax - Part material; White wax - Support material

Dimensional Stability

The 1.1% volume shrinkage, coordinated with the configuration of shrinkage compensation parameters ensures that the dimensional accuracy of the model is controlled within ±0.04mm/20mm.

Hands-free Support Removal

The 100% pure wax support material is completely soluble in the mixed solvent of anhydrous alcohol, isopropanol and PPG400 at 43℃.

Excellent Oxidation Resistance and Thermal Stability

When stored at room temperature, if unopened, it can be stored for about 5 years; Its service life after being opened is about 20 days.

Post-processing Package
Model cleaning kit

Fast response within 30 minutes

24/7 Support

1-Year Warranty

06 Worry-free after-sales service, putting customers first

Equipment Installation Support

Our after-sales engineers or authorized engineers offer on-site installation and training service to help users get started quickly.

Equipment Maintenance & Repair

We provide a standardized maintenance plan with regular return visits by after-sales engineers, including early warning, online support, on-site maintenance, efficient diagnosis and repair of equipment failures.

Remote Upgrade Service

Online communication provides the option to upgrade the latest functions of software, firmware and process in real time, so as to improve the print quality and print speed, support the types of materials to be released later, and achieve the most cutting-edge application productivity.

China

Guangzhou, Shenzhen, Hangzhou and Jinhua Flashforge service outlets

Overseas

Authorized distribution service outlets in Europe, Middle East and Asia

07 Technical parameters

Product Specification

Printing Technology	MultiJet Printing (MJP)
Build Volume	289*218*150mm
Printing Mode	XHD: 1200*1200*1600dpi, layer thickness: 16 um
Dimensional Accuracy	±0.04mm/20mm
Power Supply	AC220-240V, 50Hz, 4KW
Equipment Dimensions	1352*775*1600mm
Net Weight	480kg
Gross Weight	630kg
Package Size	1530*900*1837mm

Software & Connectivity

Slicing Software	WaxJetPrint
Supported File Format	.stl/.slc
Email Notification	√
Hard Disk Capacity	500G
Connectivity	Network 10/100/1000, Ethernet/USB
Supported Operating System	Windows 7 / Windows 10 (64bit)
Working Environment	Temperature: 18-28℃; humidity: 30-70%

Material Specification

Material Name	FFWJ1100	FFMS3100
Material Type	Part material	Support material
Net Weight	3.0KG/bottle	3.6KG/bottle
Composition	100% Wax	Wax support material
Color	Purple	White
Density@95°C(liquid)	0.76g/cm³	0.85g/cm³
Melting Point	68°C	55°C
Softening Point	63°C	-
Volumetric Shrinkage [1]	1.10%	-
Linear Shrinkage	0.70%	-
Needle Penetration Hardness [2]	9	-
Ash Content [3]	<0.01%	-
Description	High-precision casting wax material	Hands-free dissolvable support material

*Conditions: [1]Volumetric Shrinkage SH/T 0588-1994; [2]Needle Penetration Hardness GB/T 4985-2010; [3]Ash Content GB/T 14235.3-1993

08 Qualification certificate

SDS

SDS

Quality Management System Certification

Environmental Management System Certification

Occupational Health and Safety Management System Certification

RoHS

RoHS

CE

CE