白蜡 3D打印机

white wax 3D PRINTER

VANSHAPE

For Your Value

专业　敬业　合作　共赢

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声明

致用户：

● 感谢您对瑞辉自动化系统 (广东) 有限公司的信赖和支持, 选购艺辉牌系列产品，为安全操作并最大限度发挥本机性能, 请在操作前仔细阅读说明书, 并严格遵守安全规则，以防发生意外事故, 造成不必要的损失。

● 在机器使用的过程中，如遇到问题可以随时联系本公司销售人员，我们将会竭诚为您服务。

● 在保修期间，如果未经本公司允许, 用户不得擅自拆开机器进行错误的检修, 如擅自拆开机器, 保修期将自动失效, 不再享受本公司保修服务。

● 机器使用时所产生损失、利益损失和各种违规操作造成的各种间接损害，概与本公司无关。

● 未经本公司许可, 产品说明书的所有内容, 不得以任何形式翻版、传播、转载。

● 说明书因修改而进行的变更, 恕不另外通知。如果您发现任何错误或遗漏, 请向您所购买的供应商反馈, 对此, 我们深表感谢。

STATEMENT

To users:

● Thanks for choosing Yihui brand products of Yihui Casting TechnologyCo.,Ltd. We are greatly appreciated for the support and trust you give to us. To ensure safe operation and play the propperty of this machine in full, please read the user manual in advance and observe the safty rules in case that accidents happen and unnecessary loss inccurs.

● If you meet any problem when using this machine, please feel free tocontact our salespersons. We will try our best to give you service.

● During the warranty period, user is not allowed to disassemble the machine without prior permission of the manufacture r, if you did so, the warranty would automatically expire and the manufacturer wouldn't be obliged to provide warranty .

● We are not responsible for the loss including loss in interest and all indirect damages caused by operations due to rule-breaking operations.

● Without our permittion，it is prohibited to copy ,disseminate or reprint the whole content of this user manual in any form.

● This manual is subject to alterations without prior notice. If you find any mistake or omission in this manual，please inform the supplier you bought the machine from. We will be very grateful for this.

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开箱提示

本机以专用纸箱装运，在产品安装正常运行之前，请保留纸箱和包装材料，如果设备不能正常工作，请联系本公司或者经销商。

Opening Package Noted

Machine is packaged with ply-carton. Please keep the package and all of the packing material before the device is rightly installed. If machine is broken or can not work properly,please contact us or dealer to deal with the matter.

这个符号标示本说明手册中与安全特别有关的章节，附在机器上的符号是提醒对有关的操作指南引起注意。
This label is to point out the importance and the signs on the machine is to attract the attention from the operation.

这个符号指示可能存在危险电压。
This is a label of danger for electricity.

一、白蜡设备介绍　Introduction of wax white wax printer

1. 什么是白蜡　What is white wax

- 白蜡属于高性能易铸造树脂
- 相对于传统铸造树脂优势：
  1、打印速度快（速度2倍）
  2、表面光滑度高
  3、非常容易铸造，适合金货的生产

- White wax is a kind of easy-casting resin featuring high property
- Compared to traditional casting resin, it has the following advantages:
  Fast printing speed (2times as fast as normal casting resin)
  Printed models are more smooth on the surface
  Easy to cast, suitable for producing products made from gold

2. 白蜡机原理　Working principle

- 传统树脂机料盘，绷膜或者腹膜结构，打印离型较差。材料要求很强的成型能力，树脂成分多，蜡量很少，铸造性能上不来。

- 白蜡采用透氧薄膜结构，打印过程氧气参与固化过程，离型力非常小，因此打印速度可以很快，同时材料含蜡量大幅度提升，铸造性能优越。摆脱了铸造难的困扰。

- Normal 3D printers features worse release performance and printing as a release film needs to be fixed on the trays of normal 3D printers. With a high content of resin and low content of wax, the special materials needs strong shaping ability, featuring bad casting property.

- 3D wax printer adopts oxygen-permeable film, with weak release force. Oxygen gets involved in curing resin in the process of printing. Such a working principle deliver fast printing. Meanwhile, with the improved wax content, the special materials features excellent casting performance, making casting much easier.

3. 白蜡机成型能力　Shaping ability

- 花丝款打印能力不输于传统树脂
  Printing of filigree work pieces with white wax is not inferior to traditional resin.

二、白蜡机参数　Parameters of 3D wax printer

技术参数　Technical Parameters

型号　Model	M.PR.Pro150-wax	M.PR.Pro200-wax
像素尺寸(Pixel Size X,Y)	50μm	57μm
打印尺寸 Build Size	96(L)X54(W)X130(H)mm	110(L)X62(W)X130(H)mm
打印速度 Build Spe−ed	10+ mm/hr	10+ mm/hr
打印厚度 Printing Layer Thickness	25-50μm	25-50μm
光源　Light Source	工业 UV LED 405nm Industrial UV LED 405nm	工业 UV LED 405nm Industrial UV LED 405nm
打印软件 Software	V2.0 for Windows 7	V2.0 for Windows 7
文件格式 File Form−at	SLC	SLC
接口 Connectivity	USB	USB
电源 Power Supply	110/220V 50/60Hz 500W	110/220V 50/60Hz 500W
材料 Material	白蜡 white wax	白蜡 white wax

花丝款打印　filigree work　　　　**铸造效果　Casting results**
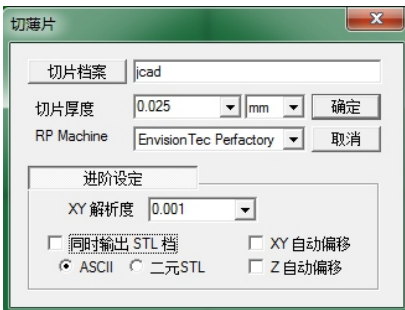
三、打印操作简单化　Simplified operation

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导入　　　开始打印　　　设置	File　　　　Print　　　　Set

1. 软件说明　Software Description

一、加支撑、排版
加好支撑,在打印机最大成型尺寸内,排好模型;底片的厚度为0.15mm;
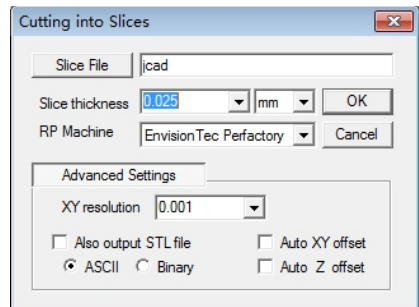
Add support, arrange models
Add supports to models. Arrange models within the maximum forming size. Set the thickness of the base 0.15mm

二、切片
将排好版的文件切成或转换为slc文件,层厚为0.025;

Slice
Slice or convert the arranged models into SLC format, set thickness 0.025

（jcad切片示例）

Copy file
Copy the sliced SLC file to the machine

三、复制文件
把切好片的slc文件复制到机器上

（jcad Slice example）

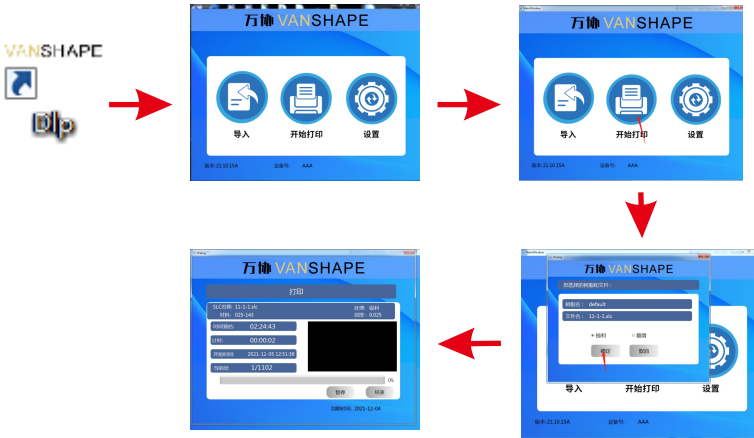## 2. 面板说明　Panel Description

一、打印

加打开软件，点击导入，选择你要打印的文件，点击打开；然后点开始打印，点击确定;机器自动开始打印；

Printing

Open the software, click "file", select the file you want to print and click" open"; Click "start printing" then "Confirm", the machine starts printing automatically.

二、后处理

打印完成后，取下基板，用裁纸刀片或铲子铲下打印好的模型，放第一个酒精盒里浸泡2-3分钟，再放第二个干净的酒精盒里浸泡30分钟（酒精需足够多）。泡完后，不要吹干酒精，直接放入盛有开水（水要没过模型）的透明玻璃烧杯里，放入固化箱里固化30分钟即可。固化完将模型拿出来吹干（可以用吹风机，冷风或中档热风吹）。
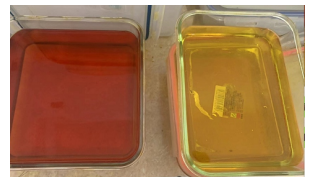
After printing

After printing, take out the printing platform from the machine, shovel the printed model with a paper knife or shovel. Put the model into the first ethanol pack to soak for 2-3 minutes. Then put it into the second ethanol pack to soak for 30 minutes (Ethanol pack must contain enough amount of ethanol). After soaking, do not blow dry the model. Put it in a transparent glass beaker containing hot water instead. Then put the beaker inside a curing box for curing 30 minutes. After curing, take out the model and blow dry it. (You can use cool air or medium hot air)

四、注意　Attention

❶ 取走料盘前,务必先取下基板,防止基板上可能残留的材料滴落在镜头上;

❷ 打印前提前通氧气5分钟以上,再开始打印;

❸ 打印时不能关闭制氧机;

❹ 如需倒料,请从前面两个角倒料,不要从后面两个角倒,防止材料流到进出气孔上;

❺ 打印前检查设置里,选择树脂,是否为025-xxx,若不是,点击一下025-xxx,然后点击返回即可(正常情况下出厂是默认的025-xxx)。

❻ 固化后,烧杯和水很烫,请注意防烫。

打印失败处理　Solutions to unsuccessful printing

如果料盘里因为打烂了,有固化的垃圾,此时把基板取走,料盘里面装适量的材料,放在正确的位置,通氧,点击设置---控制,点击红色的OFF,会变成绿色的ON,此时会照一层底片,等15s后,又自动变成红色的OFF,即完成底片的曝光,然后取下料盘,用镊子或者名片轻轻的挑起底片,然后出里面的材料,擦干净膜,把材料过滤后再使用。

Remove the base plate before taking out the tray to prevent residue on the base plate from dripping to the lens.
Connect oxygen at least 5 minutes before printing.
Do not turn off the oxygenerator when printing.
If you need to pour materials into the tray, please pour from the two front corners, to prevent the materials from flowing to the air inlet or outlet.
Before printing, please check the settings. If the resin selected is not 025-xxx, click "025-xxx", then click"back"(Usually the default is 025-xxx)
Be careful. The beaker and water are very hot after curing.

Solutions to unsuccessful printing

If the printed model is broken, leaving some residue in the tray, please remove the base plate. Pour a proper amount of materials into the tray. Then place the tray on a right place. Connect oxygen for the machine. Click "set"-control, click the red button"OFF". It becomes green button"ON". A negative film begins to shape. In 15 seconds, the "ON" button will become "OFF" again. The negative film has taken shape and been fully exposed to light. Next remove the tray, remove the base gently with tweezers. Finally Pour out the materials from the tray, clean the oxygen permeable film and filter the materials for later use.

五、维护与技术支持　Maintenance and technology support

- 注意保持操作面板及工作台面干燥、清洁。
- 机器故障，请联系本公司或专业维修人员。

- Make sure keep the operation panel and working area dry and clean.
- Machine accident,contact us or professional maintenance person in time.

重要提示　Noted

- 系统温度单位℃，时间单位：分钟
- 温度转换公式
  $℃ =(℉ - 32)/1.8000$
  $85℃=185℉$　$180℃=356℉$

- Machine temperature present unit in ℃, time unit in min
- Temperature Conversion formula：
  $℃ =(℉ - 32)/1.8000$
  $85℃=185℉$　$180℃=356℉$

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