

Tiger^{3D} APEX™



OPERATIONS MANUAL

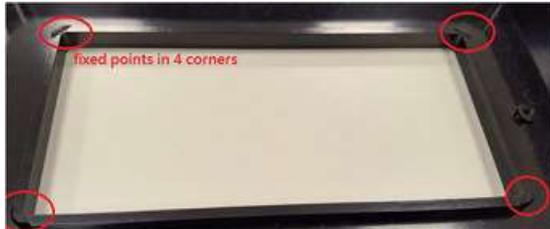
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1 Product Information

1.1 Usage Instructions

Please read through the following instructions before you start using your printer.

(1) Ensure that the glass under tank is flush against the corners to prevent damage to your 3D printer while printing.



- (2) Ensure there's no debris inside the resin tank and that the glass is set up properly before printing.
- (3) Avoid printing at the center with a single object or small parts repeatedly as it may damage the tank.

1.2 Regulatory Statements

FCC NOTICE

This equipment has been tested and found to comply with the limits for a class "A" digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense.

1.3 Safety Precautions

Please read through the following Safety Precautions before you start using your printer.



- (1) Use only the power adapter and accessories provided by the manufacturer.
- (2) Before plugging the power adapter into an electrical outlet, verify the local power rating conforms with the specified voltage and frequency.
- (3) This printer requires a grounded, single-phase electrical power source.
- (4) Make sure power and communication cables are well managed to prevent from tripping.
- (5) For best results, use resins supplied by Tiger3D printers.
- (6) Do not expose the resin tank to direct light source as the resin will solidify under UV light.
- (7) Chemical substances like resin may cause skin irritation. Please read the guidelines in the Material Safety Data Sheet (MSDS) of the resin supplied by manufacturer. Wear gloves when necessary.
- (8) Before moving the printer, be sure to drain and remove any excess resin from the resin tank and in advance to prevent spillage
- (9) Keep door closed during printing or curing to prevent UV leakage.
- (10) UV light may cause injury to the eyes. Do not stare into the printer directly during operation.
As a precaution it's recommended to wear UV protective glasses while operating the printer.
- (11) Set the printer on a flat, level surface and keep the printer in an upright position at all times.
- (12) Do not store the printer in extreme heat or frigid temperatures.
- (13) Do not disassemble or repair the device yourself. Doing so may cause further printer malfunction. For all technical questions, please reach out to a certified Tiger3D technician at 800-221-7448.
- (14) For your safety, please keep hands away from the picker plate while the printer is operational.
- (15) Force Shut-Down Method: Press the Power Button and hold 3 seconds to shut down.

1. PRODUCT INFORMATION



1.3 General Information

Product Name	Tiger3D APEX HD/ XHD /XL Tiger3D APEX Pro XHD / XXL
Power Input	Printer : 19V DC / 4.73A With Adapter : 100~240V AC, 1.5A, 50Hz/60Hz
Printer Dimension W x D x H	50 x 57 x 59 cm
Package Size and Weight	80 x 80 x 93 cm / 76 kg (Including pallet)
Operating Temperature	10° to 30°
Humidity (RH)	40% to 60% Our printer should keep in dry conditions
Storage of Printing Material	Store the materials at ambient temperature from 15° to 28° And Do not expose to direct sunlight. Resin may solidify.

- Liability: Tiger3D is not responsible for damages to the machine or injuries of the operator as a result of failing to read the instructions provide in this operations manual.
- Repair can only be carried out by an authorized Tiger3D technician.

1.4 Package Contents

As soon as you receive our products, please verify its contents and check for any exterior damage due to transportation. With the package are the following items:

TIGER3D APEX PRINTER

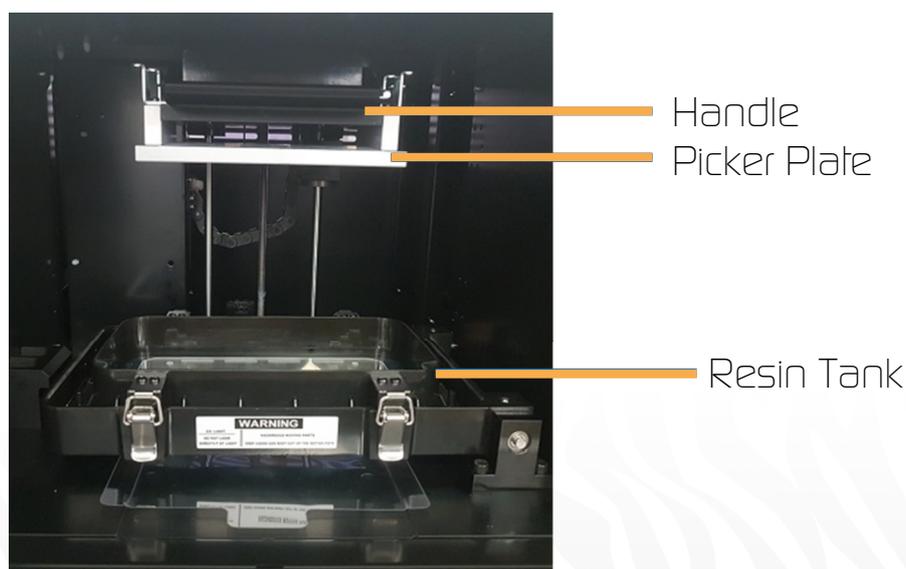
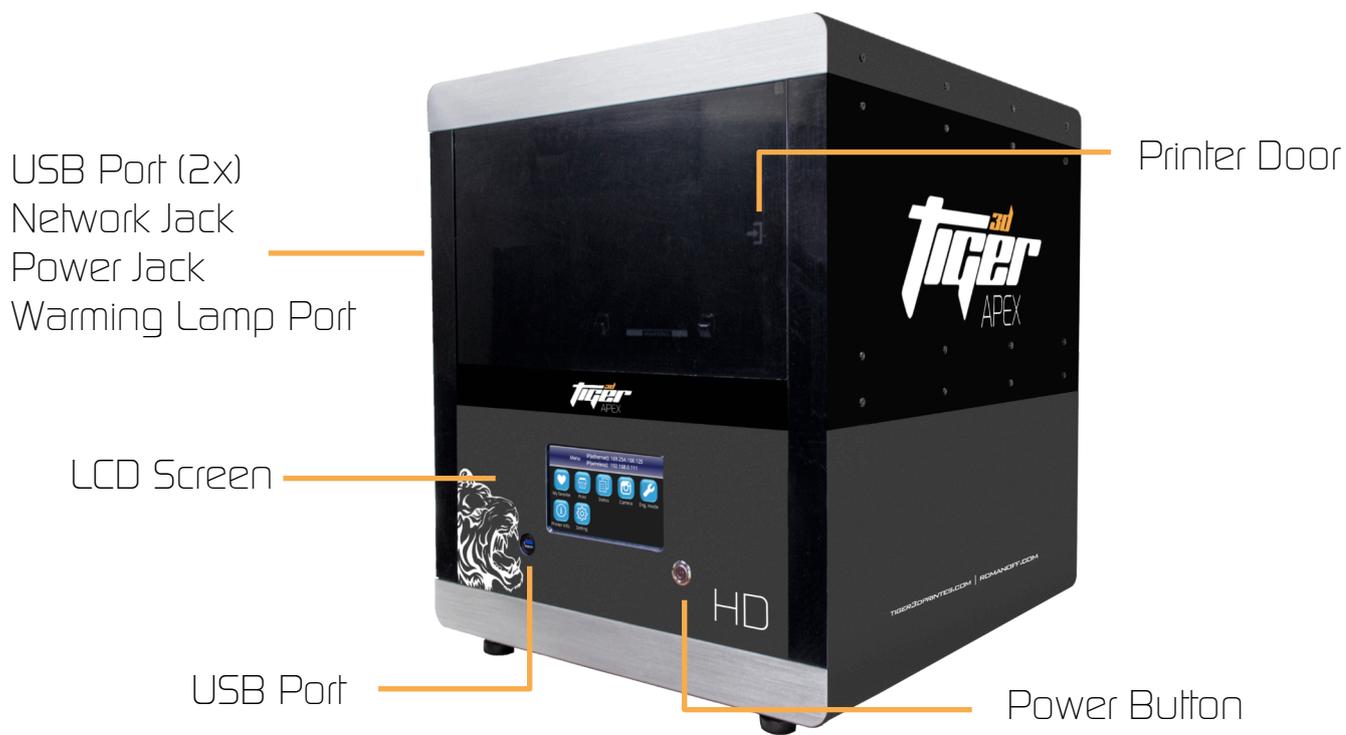


TIGER3D PRINTER RESIN: BURGUNDY



- | | | |
|--------------------|-------------------------|-----------------|
| 1. Picker Plate | 2. Ethernet Cable | 3. Power Supply |
| 4. Putty Knife | 5. Side Cutters | 6. Tweezers |
| 7. Plastic Spatula | 8. Resin Tank Container | 9. Scrapers |

1. PRODUCT INFORMATION



2. 3D PRINTER SETUP

2.1 Unpacking your 3D Printer

(2) Remove the top cardboard cover



(2) Remove the EPE surround the inner box



(3) Remove the outer cardboard panels



(4) Remove the inner cardboard cover



WARNING: Printer net weighs at least 124 pounds. (56 kilograms) Please be careful, and use proper lifting techniques to avoid injury.

2.2 Connecting to the Power adapter and Cable

(1) Connect the power cord and adapter to your device, and then plug it into an electrical outlet

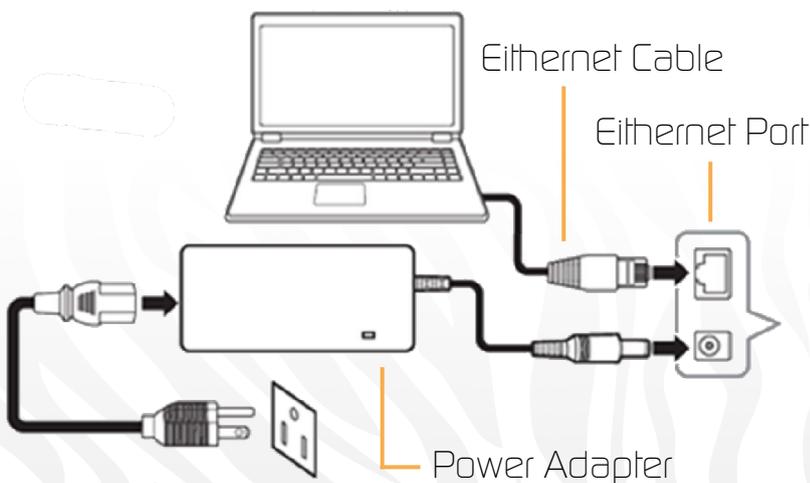
(2) Connect your printer with laptop

- Basic : Connect printer and laptop via ethernet cable (Graph1.)
- LAN : Connect both printer and laptop to local area network
- IP sharer : Connect both printer and laptop to IP sharer

[Initiating time 1 minute]

[Initiating time a few seconds]

[Initiating time a few seconds]



2. 3D PRINTER SETUP

2.3 Power Button Operation

(1) Power On

Press Power Button => Panel shows Starting up => Panel shows Menu

(2) Power Off

Press Power Button => Confirm message => Confirm to shut down

(3) Emergency shut down

Press Power Button and hold 3 seconds to shut down (4) Power Button Signal

Blue		Solid	Standby mode
		Blinking	Starting up or printing in progress
Red		Solid	Error

2. 3D PRINTER SETUP

2.4 Install Picker

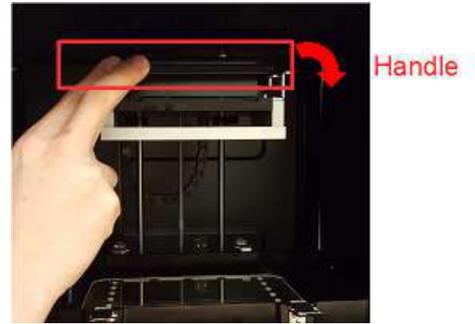
Hold the picker plate by both ends and install it into the machine

Pull down the latch to lock the picker plate in place.

1

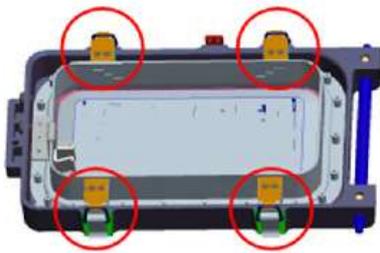


2



※ Remove the Picker: Lift the handle → Carry both end of picker → Remove the Picker 2.5 Fill resin tank.

1



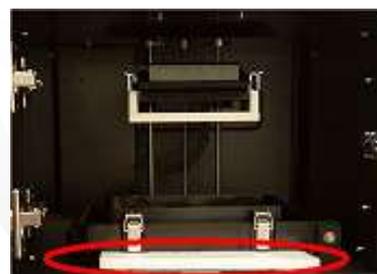
2



3



- ※ Install the resin tank with the sheet metal side facing downwards inside the printer (see pictures below)
- ※ Lock all four latches of the resin tank in place after installation
- ※ EPE sheet (white styrofoam sheet) must be removed before using your 3D printer



2.6 Consumables and Spare Parts related to resin tank

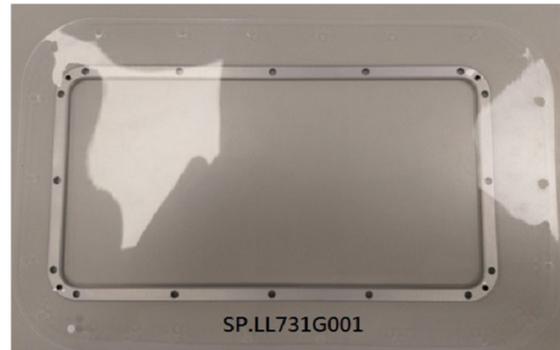
APEX SERIES

Teflon Module



APEX PRO SERIES

Teflon Film Module

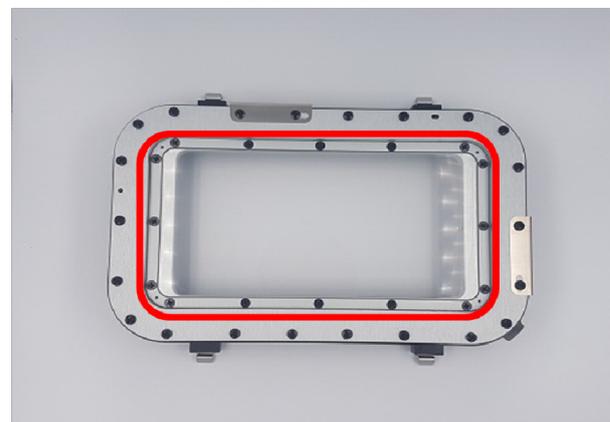


APEX PRO SERIES

Teflon Module
Top View



Teflon Module
Back View



2.7 How to replace teflon film module for the **APEX Pro series**

- (1) Turn over teflon tank module
- (2) Remove 16 screws as shown in circled red area above
- (3) Remove old teflon film module and replace with the new film module
- (4) Set all previously removed 16 screws back in place
- (5) Securely fasten all screws in place

3 3D Printer Operation – Software

Please refer to Utility User Manual, all-in-one software for Tiger3D printers.

4 After Printing

4.1 Remove Model

Lift the latch securing the Picker Plate → Remove the Picker along with the printed model → Use compressed air gun and denatured alcohol to clean the printed model → Place cleaned model in the supplied curing box → Carefully remove the printed model from the picker using the supplied putty knife



* Do not expose the resin tank to direct light source because the resin will solidify under UV light. Use tray to cover the resin tank to prevent solidify.

4.2 Clean Picker

Use putty knife or similar object to scrape away the excess printed model on the picker. If any greasy residue persists, use a soft cloth dipped in alcohol to rub the surface until the grease is removed.

4.3 Clean Resin Tank

Pour resin out of tank → Pour denatured alcohol into tank and let it soak → Use tissue or microfiber cloth to wipe the bottom of tank. Alternatively, allow the 3D printer to automatically clean itself via its Self Cleaning System. For more information, please refer to utility user manual.



CAUTION



- Do not shut down the power during curing.
- Do not interrupt the firmware upgrade process. Any interruptions during the firmware upgrade process may cause your printer to malfunction.
- Update the firmware frequently for the best user experience.
- Before printing, please check the surface of picker and tank is free of residual debris or resin that may affect print quality.
- APEX series Tank module and APEX Pro series Teflon film module are consumables. We suggest replacing them periodically to avoid loss in print quality.

3. APPENDIX | SPECIFICATIONS



ITEM	APEX HD	APEX XHD	APEX XL	APEX PRO XHD	APEX PRO XXL
ITEM SKU	78-6080	78-6050	78-6000	78-60110	78-60150
BUILD SIZE	80 x 45 x 120 mm (3.1 x 1.77 x 4.7 in)	57 x 32 x 120 mm (2.2 x 1.2 x 4.7 in)	125 x 70 x 120 mm (4.9 x 2.7 x 4.7 in)	110 x 62 x 120 mm (4.3 x 2.4 x 4.7 in)	150 x 70 x 120 mm (5.9 x 3.3 x 4.7 in)
XY RESOLUTION	41.5 μm	30 μm	65 μm	40 μm	55 μm
LIGHT ENGINE PIXELS	FULL HD 1080P (1980 x 1080 RESOLUTION)			SUPER 2.7K (WQXGA 2712 x 1528)	
Z-LAYER RESOLUTION	5 μm TO 200 μm				
WAVELENGTH (μm)	385/405 nm wavelength are available for all configurations				
SOFTWARE	<p>Operating System: Windows Supported file type: .SLC / .STL Size limit: 500mb (network) 1GB (USB)</p>				
I/O INTERFACES	Touch screen / Ethernet / Wifi, USB				
POWER INPUT	Printer: 19V DC / 4.73A / With Adapter: 100~240V AC, 1.5A, 50Hz/60Hz				
PRINTER DIMENSIONS AND WEIGHT	<p>Packed: 80 x 80 x 93 cm / 76 kilogram Unpacked: 50 x 57 x 59 cm / 56 kilograms (31.5 x 31.5 x 36.6 in / 167.2 lb) (19.6 x 22.4 x 23.2 in / 123.2 lb)</p>				