

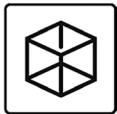
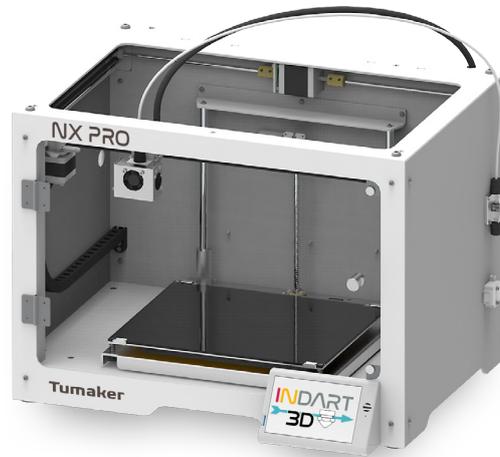
# NX PRO

## USER MANUAL

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# PRINTER SPECIFICATIONS



Printing Volume: 295x220x200 mm  
 Printer Size: 550x440x410 mm  
 Pack Size: 605x501x500 mm  
 Package Weight: 32 kg  
 Printer Weight: 30 kg



Nozzle Diameter:  
 0.2 - 0.4 - 0.6 - 0.8 - 1.2 mm  
 Nozzle temperature: 45°C - 300°C  
 Nozzle Heat Up time:  
 20°C: 200°C - 1'15" / 250°C - 1'50" / 300°C - 2'35"



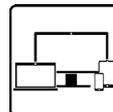
Materials: ABS, ASA, NYLON, PET-G, PLA, PP,  
 XT-CF20, TPU, PLA-3D870  
 Printing Speed: Depends on parameters



Connected to the Internet  
 Conetivity: USB, Wifi



Energy Smart Management  
 Power Rating: 500W  
 Noise Level: 44 dB (closed door, 40dB)



Display: 5" colour touch screen  
 Control Devices: PC, Tablet, Smartphone.  
 Control Mode: Web



Layer Resolution: 10µm  
 Maximum Layer Height:  
 0,8 nozzle: 0.64mm  
 0,6 nozzle: 0,48mm  
 0,4 nozzle: 0,3mm  
 0,2 nozzle: 0,16mm



Simplify3D Professional Software



Heated Bed: 45° - 150°  
 Build Plate Leveling:  
 · Semi-Automatic  
 · Manual



1 Year Limited Warranty

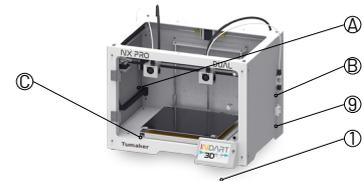
# MAIN PARTS OF THE PRINTER

## Main parts of the printer

- |                   |                  |
|-------------------|------------------|
| ① Display         | ⑤ Filament input |
| ② Nozzle          | ⑥ Drive          |
| ③ Connector       | ⑦ Bowden tube    |
| ④ Layer Fan       | ⑧ Frontal fan    |
| ⑨ Filament sensor |                  |

### Ⓐ HOTEND

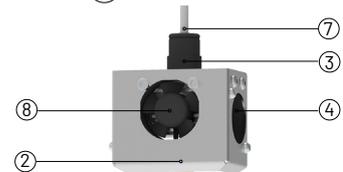
It moves in the X and Y axes by melting the filament of material and depositing it on the platform or heated bed. It has a nozzle that heats up to the required temperature according to the corresponding printing material.



### Ⓑ EXTRUDER

Supplies printing material to the head by extruding the filament.

#### Ⓐ Hotend

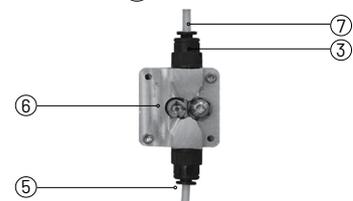


### Ⓒ PLATFORM OR HEATED BED

The printing happens on the surface of the platform; this one moves along the Z axis. Depending on the printing material, it must be heated to a different temperature.

The distance between the platform and the nozzle has to be perfectly calibrated for optimum printing.

#### Ⓑ Extruder



# ELEMENTS INCLUDED IN THE PRINTER

Make sure the following items have been delivered to you with the printer. If not, please contact us.



POWER CORD



MICRO USB CABLE



SPATULA



GLASS



FIXING LACQUER



NOZZLE CHANGING TOOL

# INSTALLATION AND SET UP

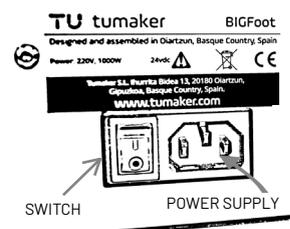
## DISPLAY

The light indicator will stay on while the printer is on.



## WIRING

To start with the installation and set up, connect the power cable to the slot on the back of the printer and plug it into the power socket. Switch on the printer by pressing the button.



Connect your device to the network of the printer

- WifiSSID: INDART3D\_XXXXXX
- Password: indart3d
- Access IP: 192.168.1.114

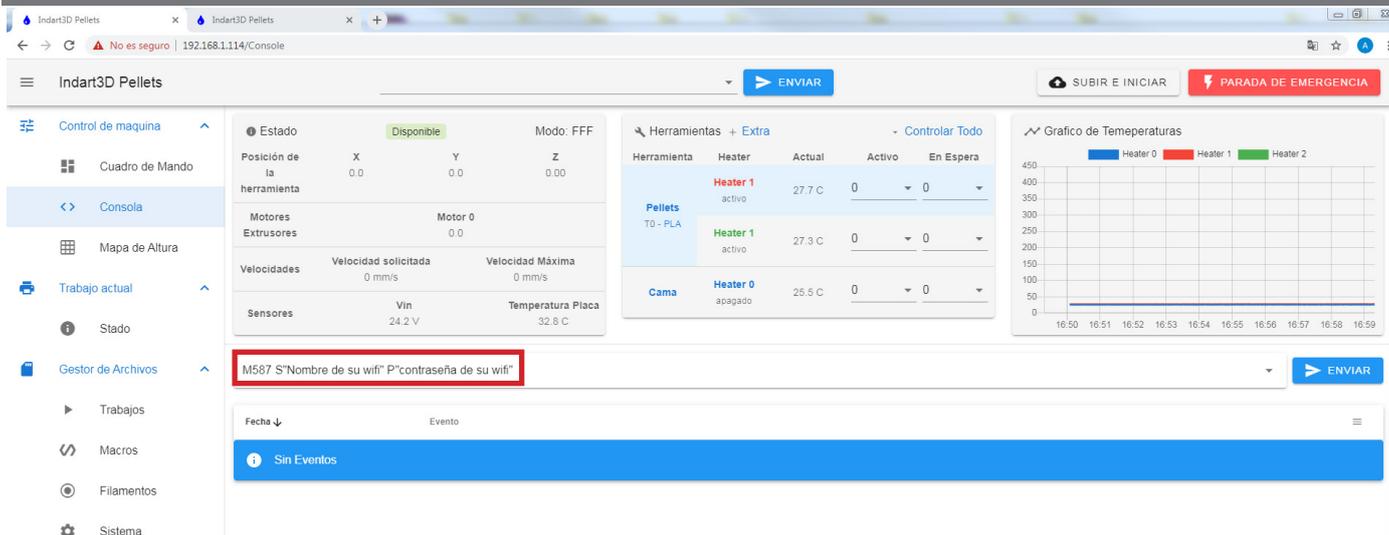
Access the web interface through the access IP in your browser



OPTIONAL: Connect the printer to the local network

If you want to put the printer on the network and access it from any device on the same network, follow the next step. Go to Console, type and send: M587 S "Name of your wifi" P "password of your wifi"

If you know a free IP on your network, you can add the following commands after the password, leaving a space: lxxx.xxx.x.xxx otherwise the router will assign a random IP.



Access the Macros / Others / Connect to the NET section and run it. Next, on the printer screen you will see the assigned IP.

If you already have your IP, access from it, go to System and open the config.g file  
**ATTENTION** changing parameters not indicated in this file may imply the malfunction of the machine

In the Network section replace: M552 S2 for M552 S1.  
 Click Save

```

0:/sys/config.g
; Fichero de configuración para el Duet Wifi (firmware versión 3)
; ejecutado por el firmware en el arranque
; Modificado por Indart3D el 22.03.2020

; General preferences
G90                ; Enviar coordenadas absolutas...
M83                ; ...pero el extrusor relativo se mueve
M550 P"Indart3D Pellets" ; Establecer el nombre de la impresora

; Network
M552 S1            ; Enable network
M586 P0 S1        ; Enable HTTP
    
```

Press YES to restart the board

I have the IP

- You can now access the printer from any device connected to this network
- If you have not entered the IP by command in the console, it is recommended to do so, so that the router does not change it:  
 M587 S "Wifi name" P "Password" I192.168.X.XXX
- If you have not obtained the IP or have any other problem, do not hesitate to consult at: <https://indart3d.com/indart3d-en/support/>

# QUICK GUIDE

## Level the Build Plate

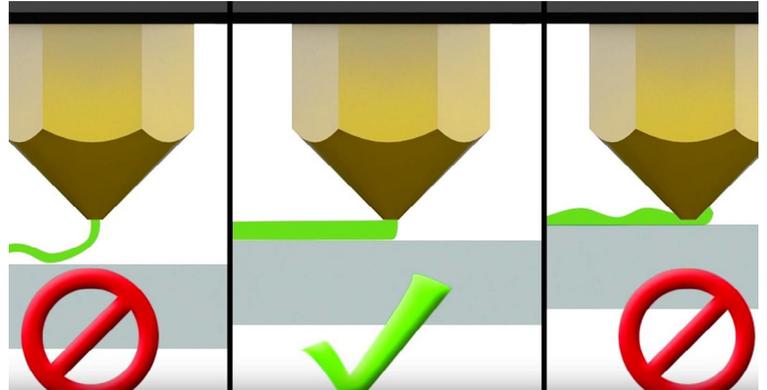
- Heat the base to the temperature you want to print at
- Make sure you have a clean tip
- Execute the calibration process found in the Macros "Calibration" section and follow the steps
- Use the knurled nuts on the base to fit the Nozzle to the Build Base
- If it was your first calibration you may have to repeat this process
- During printing, fine-tune using Z Babysteping until proper adhesion is achieved

### ÷ Z Babysteping

Offset Actual: 0.00 mm

⇕ -0.05 MM

⇕ +0.05 MM



## Load Filament

- Before loading make sure you have the base separated from the nozzle (min 10mm)
- Press Load Filament and select the material to use
- Follow the steps indicated on the screen

Herramienta	Heater	Actual	Activo	En Espera
<b>DART1</b>	<b>Heater 1</b>			
T0 - Cargar Filamento	activo	28.1 C	0	0
<b>Cama</b>	<b>Heater 0</b>			
	apagado	-273.1 C	0	0

## Load G-Code / Print

- In Jobs select: **UPLOAD FILE (S) TO G-CODE** and upload your ".gcode" file
- With the left button click on the file you want to print
- With the right button select more options
- You can create folders to organize your files by clicking

📁 NUEVO DIRECTORIO

# NOZZLE CHANGE

Below we will explain how to correctly change the nozzle.

1. Remove the material from the head
2. Unscrew the fitting and remove it together with the bowden tube.
3. Remove the nozzle using the tool and fit the new one.
4. Make sure the tip is firmly attached to the head
5. IMPORTANT: Insert the tube into the head and check that it enters to the correct area. (see image).
6. Screw the fitting a few turns, tighten the flange and re-thread all the way.



NOZZLE  
CHANGE TOOL

# SIMPLIFY 3D PRINTING SOFTWARE

Indart 3D's 3D printing stations include the Simplify3D™ professional manufacturing suite, a software with all the advanced and optimized characteristics to create the most complex objects in the highest quality. It includes a powerful simulator to make you more productive, visualizing the result of the printing strategy you're working on before you start manufacturing.

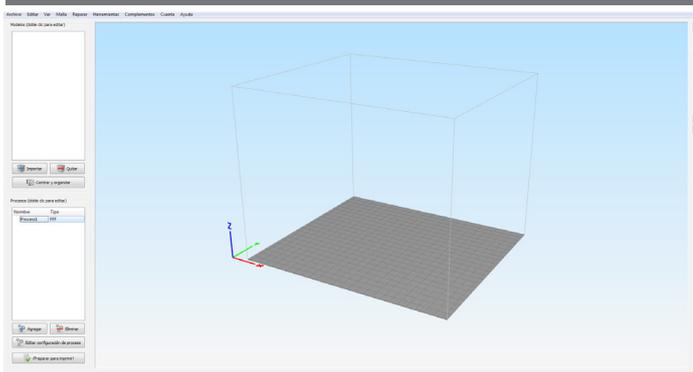
If you have any questions about the use of the Voladora do not hesitate to write us to the following email:  
<https://indart3d.com/indart3d-en/support/>

You will be able to repair the imported designs in Simplify3D itself and you will love the intelligent support option. Spectacular functionality with which the software will create the right support for the most complex parts. If you have any questions about the use of the software, please consult the following page:  
<https://www.simplify3d.com/support/>

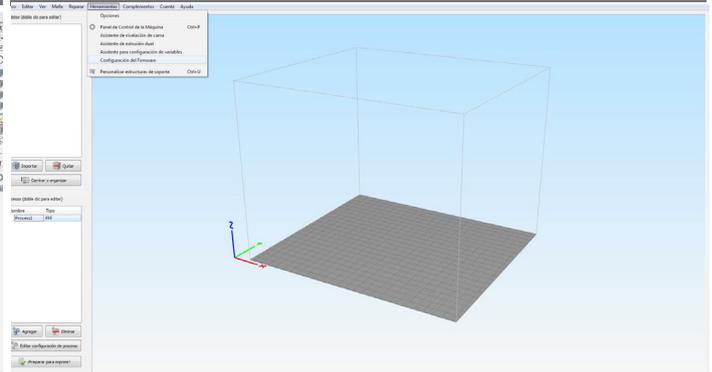


# SIMPLIFY 3D LOADING PROFILES

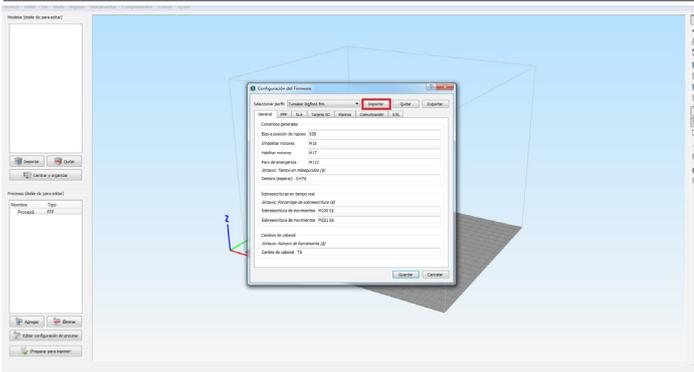
Open Simplify3d



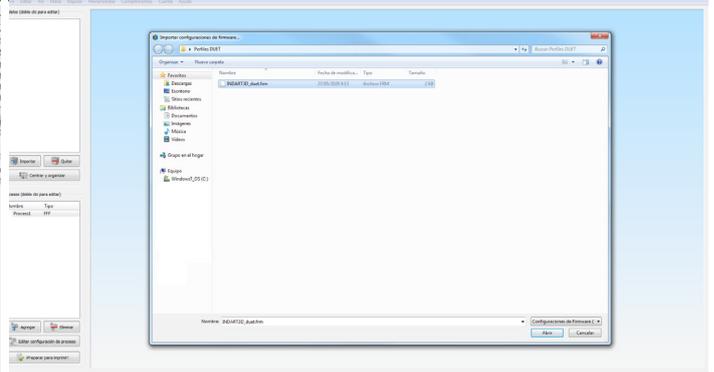
In Tools go to Firmware Configuration



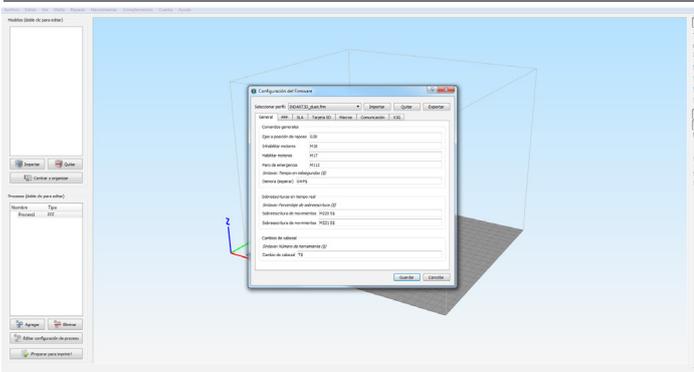
Click on Import



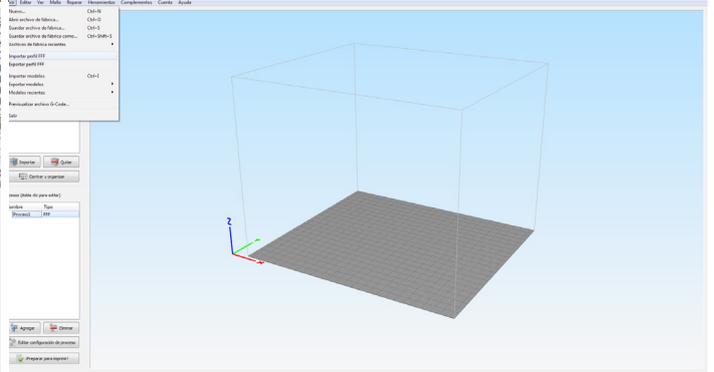
Select the .frm file



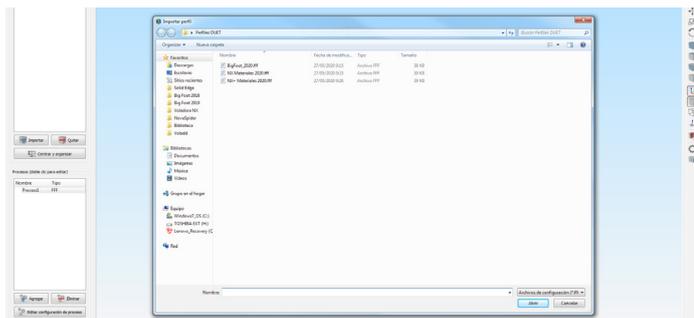
Click save



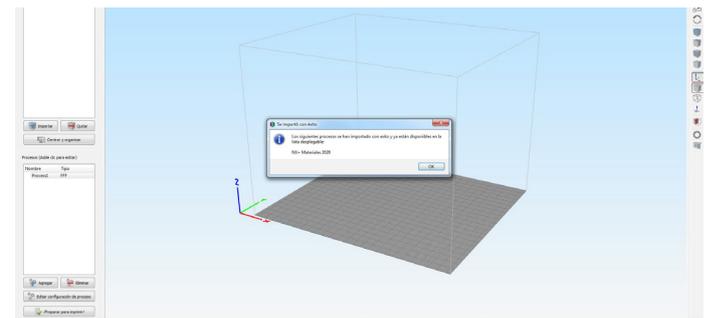
In File go to Import FFF profile



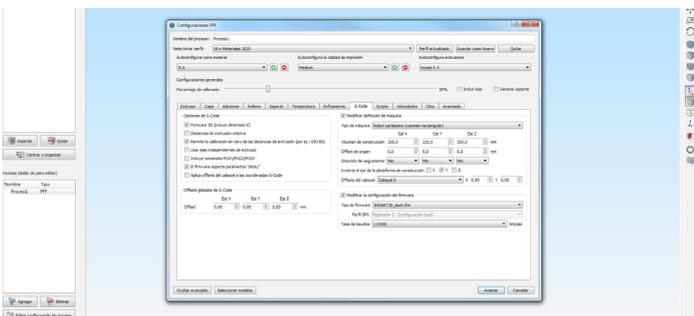
Select the .fff file you want to import



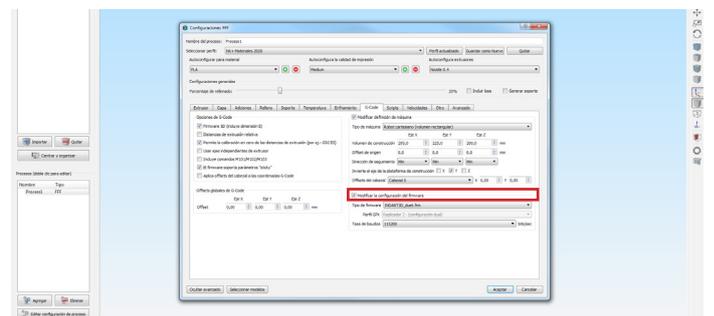
It will show a message like this



In the Process select the imported profile



Make sure that the imported .frm appears in the G-Code tab



## SECURITY

### ATTENTION, HOT SURFACE

The platform and nozzle of the head can be heated up to 120°C and 300°C depending on the printing material, therefore caution is recommended.



### RISK OF ENTRAPMENT

Do not handle any mechanical parts of the printer while it is in operation.



## BASIC RECOMMENDATIONS

- Place the printer on a firm surface without vibration.
- Place the printer in a draft-free environment with an ambient temperature between 15°C - 25°C.
- Follow the printer installation and power-up instructions.
- Use materials recommended by Indart3D to ensure proper printer operation.
- General cleaning and greasing of the printer every 6 months is recommended.
- Cleaning the head  
Every 100h of printing.  
Depending on the material it would be advisable to do it more regularly.
- It is advisable to change the nozzle periodically, every time you change spools or material. Write us and we will provide them to you.
- Make your prints by following the recommendations and parameters given by Indart3D.
- Follow the maintenance recommendations for optimal printer operation and durability.

# WARRANTY

INDART 3D S. SMALL . COOP., (“Indart3D”) provides this Limited Warranty to purchasers of the Tumaker product(s) included in the sales package (“Product”). Tumaker warrants to you that, during the warranty period, Indart3D or a service company authorized by Indart3D will, within a commercially reasonable time, remedy defects in materials, design and workmanship by repair or, if Indart3D deems it necessary in its sole discretion, replacement of the Product in accordance with this Limited Warranty (except as otherwise provided by law). This Limited Warranty shall only be valid and enforceable in the country in which you purchased the Product as long as Indart3D has intended the Product for sale in that country. However, if you purchased the Product in a member state of the European Union, this Limited Warranty is valid and in force.

Some limitations may apply to the service covered by the warranty due to the country-specific elements present in the Products. Indart3D’s obligation with respect to its products under warranty is limited to replacement of parts or repair at its discretion and at the premises of Indart3D or a dealer authorized by Indart3D. In the case of requiring the replacement of parts at the customer’s home, will be made upon acceptance of travel budget and labor. The configured and manipulated products and accessories that had to be assembled will not be covered by this warranty.

## Warranty period

The warranty period shall commence at the time of the original purchase of the Product by the first end user. Indart3D products are not consumer items. They are oriented elements for professional and industrial use. Indart3D offers **a warranty period of 1 year** valid only if it has not been misused or if the maintenance and periodic revisions required by the product for proper operation have not been carried out correctly. This warranty will not be valid in the cases specified in the “What is not covered by the limited warranty?” section.

To the extent permitted by the law of your country, the Warranty Period will not be extended or renewed or otherwise affected by the subsequent resale, repair or replacement of the Product authorized by Indart3D.

However, repaired part(s) or replacement products supplied during the Warranty Period will be warranted for the remainder of the original Warranty Period. Optional “warranty extensions” are available to the buyer, extending the warranty coverage.

## How to obtain warranty service

If you wish to make a claim under this Limited Warranty, please send your Product (or the affected part when it is not the entire Product) to a service company authorized by Indart3D. For more information on how to make a claim, see <https://indart3d.com/contact/>. Information on Indart3D authorized customer service centers and service companies can be found in the Indart 3D sales package or on local Indart3D website.

Any claim made under this Limited Warranty shall be subjected to your notice of the alleged defect to Indart3D or to a service company authorized by Indart3D within a reasonable time of discovery and in any event not later than the expiration date of the Warranty Period. When making a claim under this Limited Warranty you must provide (a) the Product (or affected part) and (b) the noriginal proof of purchase, clearly indicating the name and address of the seller, the date and place of purchase, the type of product, and the serial number.

## What is not covered by the Limited Warranty?

1. User manuals or third party software, content, data or links, configuration, included in or downloaded from the Product or during installation, assembly or shipment, as well as those incorporated at any other time in the delivery chain or otherwise acquired in any way and in any form by you. Indart3D does not warrant that Indar3D’s software will meet your needs, work in combination with any hardware or software provided by an independent vendor, or resell, repair, or replace the Product authorized by Indart3D.
2. Normal wear (including, but not limited to, wear of moving parts). Defects caused by improper handling (including, but not limited to, defects caused by sharp elements, bending, compression or dropping, etc.). Defects or damage caused by misuse of the Product, including use contrary to instructions provided by Indart3D (for the Product). Other acts beyond Indart3D’s reasonable control.
3. Defects or alleged defects caused by the fact that the Product was used with, or in connection with, any product, equipment, software and/or service not manufactured or supplied by Tumaker or was used in a manner other than for its intended use.
4. The deterioration of the Product if it has been exposed to inadequate environmental conditions, humidity or extreme atmospheric or thermal conditions or to rapid changes thereof, to corrosion, oxidation, spillage of food or liquids or to the influence of chemical products.
5. A different firmware than the one provided nor the use of a different printing base than the one recommended.
6. Direct or indirect damage resulting from the use of a third-party printing material (one that has not been supplied by Tumaker) or from the use of a consumable in an unsuitable condition (with adhering elements, grease residues or other similar incidents).
7. It does not cover damage caused by improper transport: use of packaging other than the original.
8. It does not cover the connection at a voltage other than that set by the manufacturer.

**9.** It does not cover if Tumaker products have been repaired or altered by personnel other than Indart3D or personnel not authorized by Indart3D.

**10.** It does not cover if the documentation and information requested by Indart3D is not submitted.

**11.** It does not cover if the elements which by their nature require periodic maintenance have not been carried out.

**12.** It does not cover if the lack of functionality is a consequence of the lack of knowledge on the part of the buyers.

## Returns

You have 7 business days to return a Tumaker product. This period applies from the day you receive the order and the postmark or transport company's stamp will be used to check the return date.

- The product must be in its original packaging, in new and complete condition (with all accessories, manuals, cables, etc.) and accompanied by the invoice or delivery note.
- The goods must be returned in perfect condition. Items sent or returned incomplete, damaged or deteriorated will not be accepted.
- Loss of the item or damage occurring during a shipment shall be the responsibility of the customer. We recommend that you return the items by registered mail or courier service and with insurance for the value of the product.

If all these requirements are met, the amount of the returned item will be reimbursed or, always through the same form of payment in which you paid the order and excluding the shipping costs of the return and what was paid for training, installation or other services. If the device is damaged, the amount of the repair will be deducted from the amount of the return. If a technical analysis of the product is carried out within the framework of the right of withdrawal.

Indart3D will make every effort to reimburse the customer as soon as possible.

## Responsibility

Indart3D shall not be liable to the Buyer for the failure or inability of Tumaker products to function properly. Nor for any loss, damage, injury or expense of any kind or nature caused directly or indirectly by Tumaker's products. If for any reason it is necessary to ship the Product to Indart3D's facilities, it is recommended that the Product be shipped under insurance to cover possible loss or damage. In any case, any incident related to transport will be the responsibility of the buyer. Likewise, Indart3D is not responsible for its stations not being able to print geometries not previously analyzed by its technical service.

## Anex A

The following list corresponds to some elements that are not covered by the limited warranty.

### Consumable elements

- Filaments for 3D printing
- Printing platform
- Hotend Set:
  - Fans
  - Sensors
  - Resistances
  - Heating block
  - Nozzles
  - Straight adjustor
- Bowden Tube
- Accesories