

Curso: Starting with Voladd





Index

1. Introduction to Voladd	3
2. Printer parts	
Voladd Cartridge	4
Head	5
Printing base	
Luminous indications	6
3. Setting up	7
Previous recommendations	7
Printer and software instalation	7
Application information and options	8
Connect to Wifi network	10
Voladd calibration	11
Spool adapter Instalation for Voladd	13
Change nozzle/Cartridge	14
Load filament (option only for open filament)	
Unload filament (option only for open filament)	17
Hot and extrude (advanced users)	18
4. Printing with Voladd	19
Repetier-Host (Slic3r) presets	19
Cura presets	25
Craftware presets	27
Simplify3D presets	30
Sending a GCode	32
Cancel print	34
5. Basic recommendations	35
Heated surface	35
Risk of entrapment	35
Correct Disposal	35



Introduction to Voladd

Using the Voladd 3D application completely simplifies the printing process, since the maintenance required by the equipment is minimized.

The creators of Voladd claim that the printer has a **"computer soul"** as it is equipped with an open source Beagle Bone Black microcomputer and a Linux operating system.



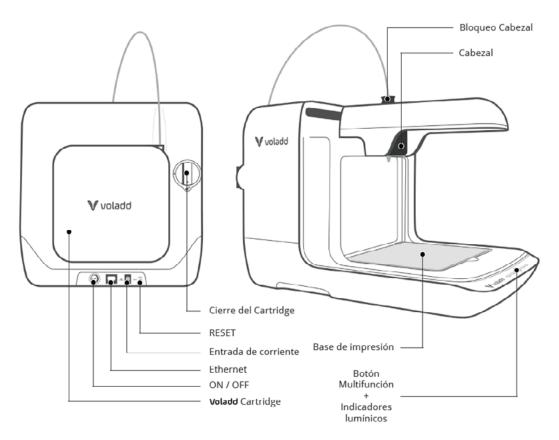
3D printing can be found perfectly integrated in multiple sectors such as industrial, food, medical, artistic, today any idea or prototype we have in mind can be brought to reality for very little money, infrastructure and time.

Other sectors have less integrated this technology, among which are the educational sector, so the important thing is to find that magical connection between technology and education that makes this integration natural and pedagogical.

For all these reasons, Voladd comes to revolutionize classrooms.



Printer parts



Voladd Cartridge

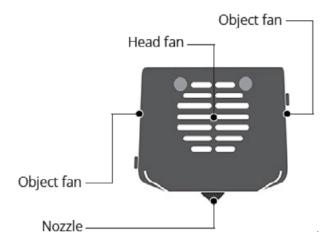
It includes a nozzle that must be heated to the necessary temperature depending on the impression material used. We have two types of nozzle, one of 0.4 mm (FINE) and the other of 0.6 mm (BOLD). In addition to a range of 7 colors, white, black, gray, orange, green, blue and red.





Head

It moves in the X and Y axes melting the filament and depositing it in the printing base or bed. It includes a nozzle that must be heated to the necessary temperature depending on the impression material used.

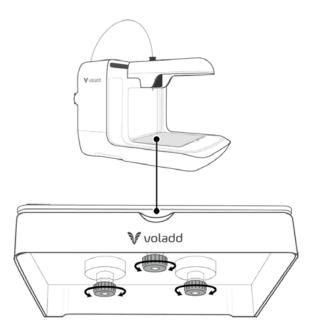


Printing base

Printing is done on a printing bed or base that is fixed with neodymium magnets on a platform that moves on the Z axis during printing. The base is easy to remove and replace thanks to the magnets. Under each magnet there are high-precision rollers for correct calibration.

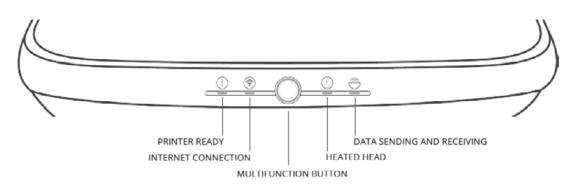
The bed is methacrylate, although there are also mirrored beds available for use at Voladd. The latter require printing lacquer or any other product that helps the pieces adhere to the bed.

It is absolutely essential that the distance between the base and the nozzle is adequate for printing is optimal. Later we will see how to carry out the calibration process.





Luminous indications



- **Printer ready:** First the light flashes. When the printer is operative, the light will be on.
- **Internet connection:** It will be on when the Internet connexion is stablished. If not, it will flash.
- **Multifunción button:** Allows you to control printer functions with a single button.
 - Blue: Waiting for user Green: Printer enabled. Waiting Cyan: Calibration Orange: Printing cancelled Yellow: Cartridge is not recognised
- **Heated head:** It will flash while the head warms up. The flashing's frequency will in-crease as the head reaches the adequate temperature for printing.
- **Data sending and receiving:** It will flash when the data exchange is done between the printer and the platform.



Setting up

Previous recommendations

IMPORTANT: For the first configuration of the machine, an IP assigned by DHCP is required on the network

WINDOWS

- Install Bonjour software to can manage Voladd. https://support.apple.com/kb/DL999?locale=es_ES
- The 22 (SCHC) and 80 (WEB) ports are open.
- Add this web adress https://bitbucket.org/ in the firewall to be able to access without problems.

LINUX

- Intall Avahi-daemon software to can manage Voladd. https://packages.debian.org/es/jessie/avahi-daemon
- Install the following library https://pkgs.org/download/libavahi-compat-libdnssd-dev
- The 22 (SCHC) and 80 (WEB) ports are open.
- Add this web adress https://bitbucket.org/ in the firewall to be able to access without problems.

Printer and software instalation

- **1.** Connect cable to the power and power supply to the printer.
- 2. We will connect the Voladd printer via Ethernet cable to the same network that we have the equipment, preferably also connected by Ethernet cable.
- 3. Wait while the printer begins the startup sequence (may take several minutes).
- **4.** We will proceed to install the Voladd application on our computer.
- **5.** We will select the Spanish or English language. We can always return to this screen to change the language whenever we need it.





Welcome to Voladd

Español English

- **6.** From the application we will connect to the printer following the following steps:
 - Connect to printer (a)
 - Search printers (b)
 - Select your printer (c)

V rorado o a O	- 0	x	Vad - D × (*) (*)
Welcome to Voladd			Manage printer Clear window Vox are not commeted to any printer, commet to one to continue. Clear window Vox are not commeted to any printer, commet to one to continue. Clear is used to provide on the notation. Clear is a start of the notation and the notation. Clear is a start of the notation and the notation.

7. Once connected the application will show us a message to update the firmware of our Voladd printer in order to continue managing it from the application. Optional (only in the event that the printer is not up to date)

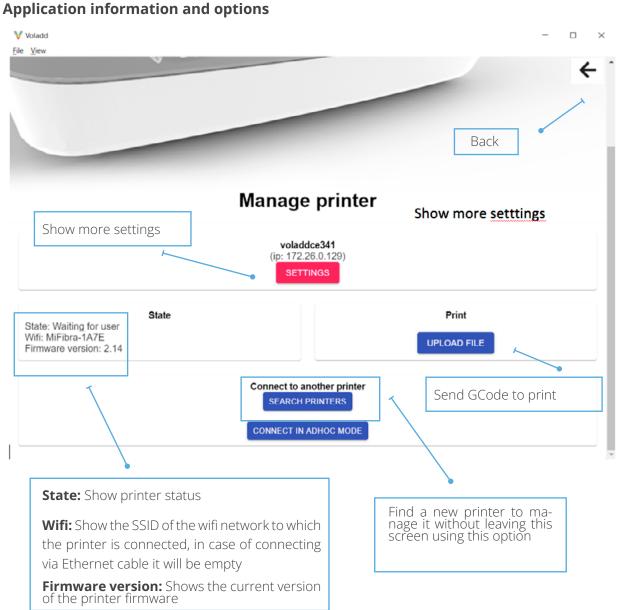
You must update your printer to continue UPDATE PRINTER



8. The process will finish correctly when after a few minutes the printer automatically restarts and the two solid white lights on the left and the dark blue multifunction button are displayed (The printer status will be "Waiting fot user").. Optional (only in the event that the printer is not up to date)



9. We will have to look for the printer again and connect to start working with it.





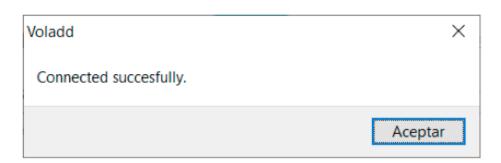
Connect to a Wifi network

To connect our Voladd printer to a wifi network we will follow the following steps:Enter the application:

- **1.** Enter the application.
- **2.** Connect to the printer.
- **3.** Select your printer.
- 4. Access to setings / Connect to a wifi network.
- 5. Select the Wifi network to which we want to connect and enter the password.

Select a wif	fi network from the ones below to conn	ect
MIWIFI_20	G_L4dw	·
Select the Wi	i-Fi network to which you want to connect your Vola	dd
	Password	
	•••••	
	CONNECT Close window	

6. We will wait the necessary time for the connection to be configured. The printer's wifi light will blink and the following confirmation message will appear.



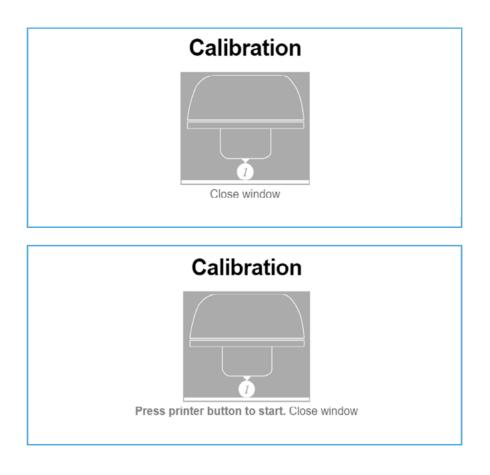


Voladd calibration

- **1.** Before calibrating, put the cartridge in and insert the head into place in the printer.
- **2.** Enter the application.
- **3.** Connect to the printer.
- 4. Select your printer.
- **5.** Access to *settings / calibration*.

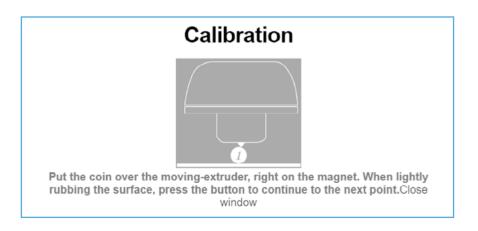
Voladd	×
Are you sure to start calibration process? Do not close t	the window until finishes the process.
	Aceptar Cancelar

- **6.** Follow the instructions of the application that will indicate what steps ti follow.
- **7. IMPORTANT:** Do not close the process window until the end of the calibration is reached.

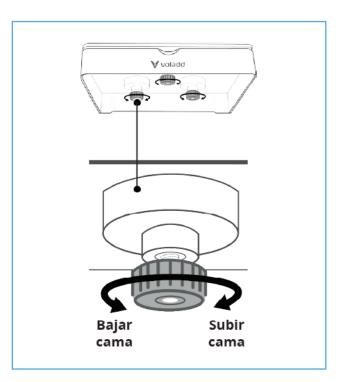




8. Place the penny, facing away from the printer, on the first magnet on the back left.



- 9. There are 3 calibration points (3 magnets). Respect the order of the points.
- **10.** The printer will start recognizing your workspace. When the recognition is complete, click the middle button to start the calibration.
- **11.**Below the base are the controls for raising and lowering the calibration points.
- **12.** Lower the base with the corresponding screw until the head does not touch the coin.
- **13.** Each turn is a "click". It is important that it is calibrated little by little: "click to click".
- **14.** Raise the calibration point to the first point where the coin moves, but does not tip. The point will already be calibrated.
- **15.** Once the first calibration point is calibrated, repeat the process on the other two points. Always respect the order of the calibration points.





16. Once the last calibration point is finished, we will finish the process.

Calibration

Click the central button of the printer and close the window to finish the process.Close window

Spool adapter Instalation for Voladd

1. Stand behind the printer and turn clockwise the gray wheel to the position indicated in the image.



3. Press on the top of the adapter until the entire frame fits perfectly, especially the extruder part.



5. Insert the end of the nozzle into the upper connector of the adapter as indicated in the image until it stops.





2. Place the adapter by inserting the tabs into the notches at the bottom side.



4. Stand behind the printer and turn the gray wheel anticlockwise to the position indicated in the image, so the adapter is fixed and finally screw the reel holder.



6. Finally, place the spool on the spool holder and insert the end of the filamentthrough the lower guide tube of the adapter until it touches the gear.







voladd

Change nozzle/Cartridge

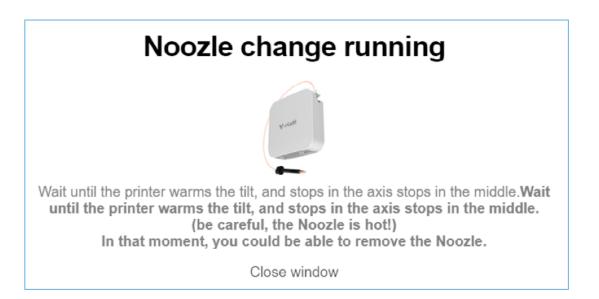
Sometimes, when the nozzle is cold, we may have difficulties to extract it in the event that we want to change the filament cartridge, for this, we will use this option to be able to extract the nozzle without problems.

- **1.** Open the application.
- **2.** Connect to the printer to change the nozzle or the cartridge.
- **3.** Select your printer.
- **4.** Access to Settings / *Nozzle change*.

Voladd		×
¿Are you sure about changing t	he tip?	
	Aceptar	Cancelar

5. Activating this option the multifunction button will change cyan color, indicating that you are executing the action correctly.

IMPORTANT: We can manually cancel this process by holding down the multifunction button on the printer.





After a few seconds, turn the nozzle counterclockwise 90° * and in the rear part we will lower the 6. black tab to remove the tube that goes with the nozzle.

In case we do not have **the tool to use to open filament spools** we will follow the next steps:

- 1. Press the black tab on the 2. Without releasing the tab, 3. In the part where the top of the adapter.
 - pull the guide tube upwards until it is removed.
- nozzle is inserted, turn anticlockwise.



4. Once turned, completely remove the nozzle.





5. To install a new nozzle, perform the same steps in reverse.





In case it is a Voladd cartridge we will continue with the following steps. Stand at the back of the printer..

- Stand on the back of the printer. 7.
- 8. Turn the knob clockwise to the open padlock.
- 9. Remove the cartridge.
- **10.** Insert the new cartridge from below until a slight "click" is heard.
- **11.** Insert and secure the head.

the Uμ tri

🔰 voladd

12. At the end of the process in the application, the following warning message will appear.

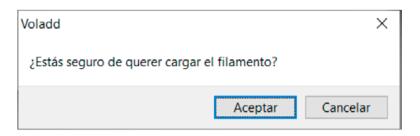
Voladd		×
Secuencia de cambio de fil	amento finalizada	
		Aceptar
careful when removing printing head as it heats to 80°C during the car- ge change process.	V voladd	V voladd



Load filament (option only for open filament)

If we have purchased the accessory to use open filament spools we can use this option to load the filament and extrude to be able to print with filament in spools using a spool holder.

- **1.** Open the application.
- **2.** Connect to the printer to change the cartridge.
- **3.** Select your printer.
- **4.** Access to Settings / Nozzle change.



5. Follow the instructions of the application.



- **6.** If we have problems introducing the filament, try to cut the inclined end to facilitate its entry into the tube that goes to the nozzle
- 7. At the end of the process in the application, the following warning message will appear.

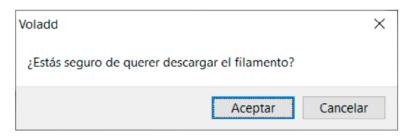
Voladd	×
Secuencia de cambio de filamento finalizada	
	Aceptar



Unload filament (option only for open filament)

If we have purchased the accessory to use open filament spools, we can use this option to remove the filament to be able to change the filament spool.

- **1.** Open the application.
- **2.** Connect to the printer to change the cartridge.
- **3.** Select your printer.
- 4. Acces to Settings / Unload filament.



5. Follow the instructions of the application.



6. At the end of the process in the application, the following warning message will appear.

Voladd	×
Secuencia de cambio de filamento finalizada	
	Aceptar



Hot and extrude (advanced users)

This option will allow us, in case no filament comes out of the nozzle, to extrude a few centimeters of plastic so that we unclog the nozzle.

- 1. Enter the application
- 2. Connect to the printer where we want to extrude filament to unclog the nozzle.
- **3.** Select your printer.
- 4. Access Setting / Heat and Extrude.
- **5.** Activating this option the multifunction button will change to light blue, indicating that you are executing the action correctly.
- **6.** After a few seconds, the printer will heat up to the extrusion temperature and will proceed to extrude a few centimeters of filament.
- 7. At the end of this process the light of the multifunction button will change to idle state, blue.

Check firmware

To find new firmware updates for our Voladd printer we will follow the following steps:

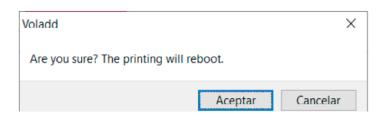
- **1.** Enter the application.
- **2.** Connect to the printer.
- 3. Select your printer.
- 4. Access to settings / Check firmware update.

Voladd	Х
Checking if there is new firmware version, you will see a message in the screen if some update is available.	
Acepta	r

5. If it finds any available update it will show us a message in the application.

Update	available, please u	ipdate it.	
	UPDATE PRINTER		

6. Press *Update* to update the printer.





Printing with Voladd

From the desktop application we can send to print our GCode files generated with any of the most used programs on the market, Repetier-Host (Slic3r), Cura, Craftware or Simplify3D.

To do this, we must first generate our GCode from the 3D file in STL format. Next, we will indicate the parameters necessary to configure our profile for Voladd in the softwares named above.

Repetier-Host (Slic3r) presets

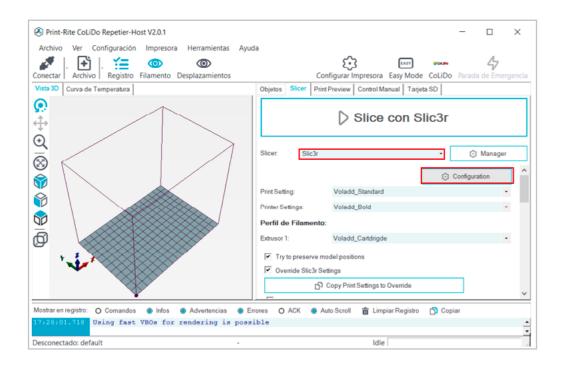
Download the free software from the following link <u>https://colido.es/software-repetier-host.</u> Start Repetier-Host and configure the following parameters.

1. **Configure printer** we will access the **Printer Dimensions** tab and complete the data shown in the blue box. We will do this whenever we are going to generate a GCode for Voladd, it is important that it is correctly completed with the indicated values. **Apply and OK.**

Print-Rite CoLiDo Repetier-Host V2.0.1	- 🗆 X
Archivo Ver Configuración Impresora Herramientas Ayuda	
Conectar Archivo Registro Filamento Desplazamientos	Configurar Impresora Easy Mode CoLiDo Parada de Emergencia
	Print Prev Configural Impresora arjeta SD
	Impresora Ajustes
	Impresora: dofault
	Conexion Impresora Extrusor Dimensiones Impres Scripts Avanzado
	Printer Type: Impresora cartesiana •
	Reposo X: 0 Reposo Z: 0
	X Min 0 X Max 170 Coord. X Plat. 0
	Y Min 0 Y Max 120 Coord. Y Plat 0
	Anchura area de impresión: 170 mm
	Profundidad area de impr.: 120 mm
Mostrar en registro: O Comandos 🔿 Infos 🕥 Advertencias 🌚 Errores O ACK	Altura area de impresión: 150 mm
17:28:01.718 Using fast VBOs for rendering is possible	Los valores mínimo y máximo definen el rango de cordenadas del extrusor. Estas coordenadas
Desconectado: default -	pueden ser negativas y salir de la plataforma. Coord X/Y de la plataforma define las coordenadas donde la plataforma comienza. Cambiando los valores min/max puedes mover el origen en el centro
	de la plataforma si el firmware lo soporta.
	E
	tt
	OK Aplicar Cancelar

2. Secondly, in the Slicer tab, select **Slic3r** as the slicer program. Then **Configuration** to access manual configuration.

Once the GCode has been generated using the **Slice option with Slic3r**, we must save the file by selecting **Save to File**.



- **3.** Once we access Slic3r, we will have to load three configuration files.
 - **Print Settings:** The default print quality file, which we can adjust in advance to create our own profiles.

💈 Slic3r			- 0	×
File Window Help				
Print Settings Filament Settings	Printer Settings			
Voladd_Standard Version Voladd_Standard Version Versio	Layer height Layer height: First layer height:	0.2	mm mm or %	^
Support material Speed Multiple Extruders Advanced Output options Output options Notes	Vertical shells Perimeters: Spiral vase:	2	(minimum)	
	Horizontal shells Solid layers:	Top: 5	Bottom: 3	
	Quality (slower slicing) Extra perimeters if needed: Avoid crossing perimeters: Detect thin walls:	X – X		~
	<			>
Version 1.2.9 - Remember to check for	or updates at http://slic3r.org/			



In the corresponding tab we will go to **File / Load Config** and select the **Voladd Standard Print Qua-lity Slic3r** configuration file to load the parameters.

-> • 🛧 🔤 « I	mpresora Voladd > Perfiles de impresion > Slic3r	∽ 🖑 Buscar en S	lic3r 🔎
ganizar 👻 Nueva	carpeta		iii 🕶 🛄 🤇
🕹 Descargas 🛛 🥤	Nombre	Fecha de modificación	Тіро
😫 Documentos	Voladd Filament Slic3r	29/05/2020 10:50	Opciones de confi
Dpto. 3D (172.26	Voladd Printer Slic3r - Bold	29/05/2020 13:00	Opciones de confi
Escritorio	Voladd Printer Slic3r - Fine	29/05/2020 13:01	Opciones de confi
📧 Imágenes	Voladd Standard Print Quality Slic3r	29/05/2020 10:51	Opciones de confi
Música	, (
No	mbre: Voladd Standard Print Quality Slic3r	✓ INI files *.ir	ni v

Then, we will save this profile with the save symbol with the name that appears on the screen.

💈 Slic3r			_	\times
File Window Help				
Print Settings Filament Settings	Printer Settings			
Voladd_Standard 🗸 🔚 🤤	Layer height			^
Layers and second secon	×	0.2	mm	
Skirt and I	nt:	0.3	mm or %	
Support n Save print settings	as:			
Speed Voladd_Standard	~			
Multiple E OK	Cancel	2	(minimum)	
Advanced Output options	Spiral vase:	<u> </u>	• (minimun)	
Notes	spiral vase.			
	Horizontal shells			
	Solid layers:	Top: 5	Bottom: 3	
	Quality (slower slicing)			
	Extra perimeters if needed:	\checkmark		
	Avoid crossing perimeters: Detect thin walls:	NDN		
	Vetect thin walls:			>
Version 1.2.9 - Remember to check for	or updates at http://slic3r.org/			



• **Filament Settings:** The configuration file for printing parameters for Voladd filament cartridges

💈 Slic3r			— 🗆 X
<u>File Window H</u> elp			
Print Settings Filament Settings	Printer Settings		
Voladd_Cartdrigde Voladd	Filament		
Filament Cooling	Color:		
Z Cooling	Diameter:	1.75 mm	
	Extrusion multiplier:	1	
	Temperature (°C)		
	Extruder:	First layer: 205	◆ Other layers: 205
	Bed:	First layer: 0	• Other layers: 0
	<		>
Version 1.2.9 - Remember to check f	or updates at http://slic3r.org/		

In the corresponding tab we will go to **File / Load Config** and select the **Voladd Filament Slic3r** configuration file to load the parameters.

• • • •	« Imp	oresora Voladd > Perfiles de impresion > Slic3r	✓ [™] Buscar en [™]	Slic3r 🔎
rganizar 👻 Nu	eva car	peta		📰 👻 🛄 💡
📜 Objetos 3D		Nombre	Fecha de modificación	Тіро
🛃 Vídeos		Voladd Filament Slic3r	29/05/2020 10:50	Opciones de confi
🏪 Sistema (C:)		🚋 Voladd Printer Slic3r - Bold	29/05/2020 13:00	Opciones de confi
DriverCD (D:)		📓 Voladd Printer Slic3r - Fine	29/05/2020 13:01	Opciones de confi
👉 Red	÷.	Voladd Standard Print Quality Slic3r	29/05/2020 10:51	Opciones de confi
	~	٤		
	No <u>m</u> b	re: Voladd Filament Slic3r	✓ INI files *.i	ni v



Then, we will save this profile with the save symbol with the name that appears on the screen.

💋 Slic3r					_		\times
File Window	Help						
Print Settings F	Filament Settings	Printer Settings					
Voladd_Cartdrig	gde 🗸 🔚 🤤	Filament					
S Filament	Save preset	×	<				
	Save filament Voladd_Cartd			1.75 mm 1			
	ОК	Cancel					
		Extruder:		First layer: 205	• Other laye	rs: 205	
		Bed:		First layer: 0	Other laye	rs: 0	
		<					>
larrian 120 Per	member to check f	or undates at http://s	K-2/				

• **Printer Settings:** The Voladd printer parameter configuration files for cartridge with BOLD nozzle and for cartridge with FINE nozzle.

互 Slic3r				_		\times
<u>File Window H</u> elp						
Print Settings Filament Settings	rinter Settings					
Voladd_Fine 🗸 📙 🥥	Size and coordinates					^
General Custom G-code Extruder 1	Bed shape:	يَنْ Set]			
	Z offset:	0	mm			
	Capabilities Extruders:	1				
	OctoPrint upload Host or IP: API Key:		GBrowse	J.	Test	
	<					>
Version 1.2.9 - Remember to check fo	r updates at http://slic3r.org/					



In the corresponding tab we will go to **File / Load Config** and select the configuration file **Voladd Printer Slic3r - Bold** and **Voladd Printer Slic3r - Fine** to load the parameters, first load and save one and then the other.

⊢ → ✓ ↑ 🧧 « Impresora Voladd → Perfiles de impresion → Slic3r	v Ö Buscar en S	lic3r	P
Organizar 👻 Nueva carpeta		88 • 🔳	0
Descargas ^ Nombre ^	Fecha de modificación	Тіро	
Documentos Voladd Filament Slic3r	29/05/2020 10:50	Opciones de cor	nfi
Dpto. 3D (172.26 Voladd Printer Slic3r - Bold	29/05/2020 13:00	Opciones de cor	nfi
Escritorio 🕘 Voladd Printer Slic3r - Fine	29/05/2020 13:01	Opciones de cor	nfi
Imágenes Woladd Standard Print Quality Slic3r	29/05/2020 10:51	Opciones de cor	afi
Música v K			
Nombre: Voladd Printer Slic3r - Bold	 INI files "Jir 	si .	~

Then, we will save this profile with the save symbol with the name that appears on the screen.

💋 Slic3r					\times
File Window I	Help				
Print Settings Fi	lament Settings	Printer Settings			
Voladd_Bold	~ 😑 🛢	Size and coordinates			-
General	Save preset	×	Set		
F Extruder 1	Save printer se	ttings as:	0 mm		
	Voladd_Bold OK	Cancel			
		Capabilities			
		Extruders:	1		
		OctoPrint upload			
		Host or IP:	Q.Browse	Test	
		Host or IP: API Key:	GBrowse	Test	

With this process we can finally select the profiles to generate our GCode with Repetier-Host (Slic3r).

Print-Rite CoLiDo Repetier-Host V2.0.1				- 🗆	×
Archivo Ver Configuración Impresora Herramientas Ayu Archivo - Archivo - Registro Filamento Desplazamientos	da	Configurar Impresora	Easy Mode CoLiDo	Parada de Err	nergencia
Vista 3D Curva de Temperatura	Objetos Slicer	Print Preview Control Ma	nual Tarjeta SD		
		Slice	con Slic3r		
	Slicer. Slic	3r	•	🕄 Manag	per 🔨
			\$	Configuration	
	Print Setting:	Voladd_Standard			•
	Printer Settings:	Voladd_Bold			-
	Perfil de Filame	ento:			
	Extrusor 1:	Voladd_Cartdrigde			•
	Try to present	ve model positions 3r Settings			
		Copy Print Settings to (Dverride		~
Mostrar en registro: O Comandos 💿 Infos 💿 Advertencias 💿 E	rrores O ACK	Auto Scroll 💼 Limpi	ar Registro 👩 Co	piar	
17:20:01.718 Using fast VBOs for rendering is poss	ible				<u>^</u>
Desconectado: default -		Idle			



Cura presets

To configure the printer in Cura we must create a custom printer with the following parameters.

C Ultimaker C jle Edit View 😒	ura <mark>ttngs</mark> Extensions Preferences <u>H</u> ek	Þ			- 0
Ultim	Printer	 Network enabled printers 			
Olum	Extruder 1	 Local printers 	EVIEW MONITOR		Marketplace
	Configure setting visibility	Voladd Bold		[™]	
	Voladd Fine	 Voladd Fine 	< 📮 Extra Fast - 0.3mm	🔯 20% 🗳 Off	÷ off 🖉
		Add Printer Manage Printers			
		Franage Frinceis			

1. Access to **setting / printer / add printer**

 We will go to the section Add an offline printer / Custom and modify the name of the printer. We will create two printers in the case of Voladd, Voladd Bold for when we use Bold filament cartridge and Voladd Fine for when we use Fine filament cartridge.

Add a printer	
Add a networked printer	<
Add a non-networked printer	~
 Custom Custom FFF printer 101Hero 3Dator GmbH 3DMaker 3DTech ABAX 3d Technologies Alfawise Anet Anycubic 	
Printer name Custom FFE printer	
Cancel	Add



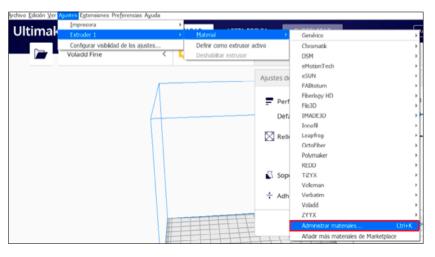
3. We will add the following parameters for both custom printers.

Machine Settings Oladd Bold Printer			×	G Machine Settings			
Printer							
	r	Ext	ruder 1	Voladd Fine			
				~	inter	Ext	truder 1
rinter Settings Width)	170 mm	Printhead Settings	0 mm	Printer Settings		Printhead Settings	
woth)	120 mm	X min	• mm	X (Width)	170 mm	X min	0
	150 mm	X max	o mm	Y (Depth)	120 mm	Y min	0
leight)				Z (Height)	150 mm	X max	0
d plate shape	Rectangular 🗸	Ymax	0 mm	Build plate shape	Rectangular 🗸	Ymax	0
gin at center		Gantry Height	150 mm	Origin at center		Gantry Height	150
ted bed		Number of Extruders	1 ~	Heated bed		Number of Extruders	1
ed build volume		Shared Heater		Heated build volume		Shared Heater	
le flavor	Repetier 🗸			G-code flavor	Repetier 🗸 🗸		
G-code		End G-code		Start G-code		End G-code	
X0 Y0 P2000		M104 80 G91	Extruder heater o	G1 NO YO #2000		M104 80	Extruder hea
2 E0 /Zero extruder	r position	090	/Relative position ;Absolut positioni	090 092 E0 ;2ero extru	ider position	091 090 00 X0 Y100 F6000	;Relative pos ;Absolut posi ;Go to X Y re
20.2 F1000 Y110 E35 F200 ;Extrud	de 35mm of filament	G0 X0 Y100 F6000 G0 Z149 F1000	1Go to X Y repose :	G1 Z0.2 F1000 G1 Y110 E35 F200 ;Ext	trude 35mm of filament	GO XO Y100 F6000 GO Z149 F1000	JGO tO X Y IM
2 E0 ;Zero extruder 1	r position			G21 G21 JZero extru	ider position		
0 4 F0.01				G90 G64 P0.01			
			Cose				
chine Settings			×	G Machine Settings			
add Bold				Voladd Fine			
Printe	e e e e e e e e e e e e e e e e e e e	Extr	uder 1	P	rinter	Extr	ruder 1
zle Settings				Nozzle Settings			
zle size	0.6 mm			Nozzle size	0.4 mm		
npatible material diameter	1.75 mm			Compatible material diameter	1.75 mm		
zzle offset X	0 mm			Nozzle offset X	0 mm		
zzle offset V	0 mm			Nozzle offset V	0 mm		
ing Fan Number	0			Cooling Fan Number	٥		
ruder Start G-code		Extruder End G-code		Extruder Start G-code		Extruder End G-code	
ruder start G-code		Extruder End G-Code		Extruder start o-code		Extroder End G-code	
			Close				
Iniciar GCod	le			Finalizar GCod	e		
G1 X0 Y0 F20	00			M104 S0 ;Extrud	er heater off		
G90				G91 ;Relative pos	sitioning		
	ovtrudor posit	ion					
	extruder posit	.1011		G90 ;Absolut pos			
G1 Z0.2 F100				G0 X0 Y100 F600	10 ;Go to X Y rep	ose position	
	F200 :Extrude	35mm of filamer	nt	G0 Z149 F1000			
G1 Y110 E35							
		ion					
G92 E0 ;Zero	extruder posit	tion					
		tion					

 We will create the profile for the Voladd filament in Settings/ Extruder 1 / Material / Manage Materials.

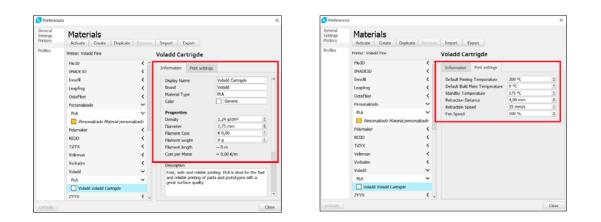
🛛 📝 voladd

G R O U P



5. We will go to **Create** to create the new custom material.

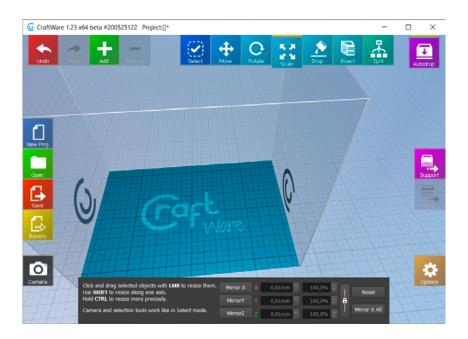
General Settings Printers	Materials	ate Remove	Import Export			
Profiles	Printer: Voladd Fine		Material persona	lizado		
	Favortes Generic	< ^	Information Print se	ttings		
	Generic ABS Generic CPE Generic HIPS Generic Nylon		Display Name Brand Material Type Color	Material personaliz Personalizado PLA Generic	ado	4
	Generic Pyton Generic PC Generic PETG Generic PLA Generic PVA		Properties Densky Diameter Filament Cost Filament weight	1,24 g/cm ³ 1,75 mm € 0,00 0 g	0	
	Generic TPU 95A Chromatik D5M	<	Filament length Cost per Meter Description	~ 0 m ~ 0.00 €/m		
	eMotionTech eSUN FAiltotum Fiberloov HD		Fast, safe and relab	le printing. PLA is ideal for of parts and prototypes wi ,		Ŧ



Craftware presets

To configure the printer in Craftware we must create a custom printer with the following parameters.

1. Access to **Options**.

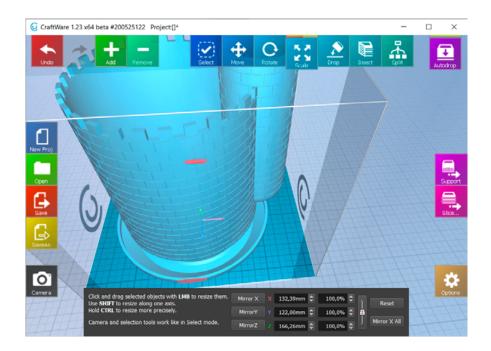




2. In the **Printer** tab, we will complete the parameters that we see in the image and we will use the **Store** option to save the profile for our Voladd printer..

Options				
General Graphics Keyboard Colors Printer About				
Printer presets				
Voladd	Store	Delete	Import	Export
Size		Coordinate system		
Width (X)	170 mm 🗘	Origir	+ Direction	Offset
Depth (Y)	120 mm 🗘	X Left 🔫	Left to Right 👻	0,0 mm 🗘
Height (Z)	150 mm 🗘	Y Front 👻	Front to Back 🔹	0,0 mm 🗘
Parts		Circular platform		Front Left corner
		0,0 position on bed is	; at [X0 Y0]	
Build Plate Kapton				
Hotend Regular				
G 1 X0 Y0 F2000 G90 G92 ED ;Zero extruder position G1 20.2 F1000 G1 Y1.10 E35 F200 ;Extrude 35mm of filament G92 E0 ;Zero extruder position G21 G90 G64 P0.01	6	M1104 50 G91 G90 G0 Z0 Y100 F G0 Z149 F10		;Edruder heater of ;Relotive positioning ;Absolut positioning ;Ga to X Y repose position
Dual Extruder		Connectivity		
Work area offset	0 mm 📄	Upload method	CraftPrint	
ilament price/meter			GCode vie	ewer acceleration estimation
Specify in the form "name1=price1; name2=price2;"				ration 800 mm/s^2 🗘
PLA=0.091; ABS=0.075; PVA=0.15			Defaults Corner coe	fficient 4,0000 🗘
ilament density (g/cm³)				10 mm/s 🗘
Specify in the form "name1=density1; name2=density2;"				40 ms 🗘
PLA=1.25; ABS=1.04; PVA=1.23; PETG=1.23; TPU=1.21; HIPS=1.00	2		Defaults	

3. When we go to configure the slicing parameters, we access **Slice**.





4. To generate the GCode for a cartridge with a **Bold nozzle**, we will configure the **Nozzle Size 0.6mm** in the **Printer** section and for the cartridge with a **Fine nozzle** we will use **Nozzle Size 0.4 mm**. The same on the **Basic** tab, the **Extrusion Width** parameter.

(U Slice			×
Fasy Tweaker	Presets		
Print quality Printer Material	Voladd Bold*		
Ultra Nozzle Size 0.4 mm 🔻 Material PLA 💌	Load Store Delete	Load Defaults Import Ex	xport
High Build Plate Kapton	Basic Advanced Foundation Tem	perature GCode Dual Extruder	
Medium Hotend Regular Y Apply	Resolution	✓ Top/Bottom Shell	
Preview	Extrusion Width 0,600 mm 🖨	Type Parallel lines	
	Layer Height 0,300 mm 🜩	Top/Bottom Layers 5 🖨 3 🌲	-
	Draw Speed 60 mm/s 🖨	Thickness 1.500 mm, 0.900) mm
	. Extruder	Density/Width 100% 🗘 100%	ò 🌲
I I rart I	Filament Diameter 1,750 mm 🖨	Speed 100%	6 🗢
	Flow Adjust 100% 🗘	Min.Line Length 0,5 EV	/ 🗢
\checkmark \land	Vertical Shell	ZigZag Optimization 2,0 EV	V \$
V VO(I C	Loop Count 3 loops 🌲	Angle/Increment 45° 🗘 90'	• 🗘
	Thickness 1.800 mm	✓ Enable Micro-Travels	
Hints	Lock H and V Shell Thickness	✓ Infill	
Easy Tweaker	Vertical Shell Offset 0,000 mm 🤤	Type Parallel lines	
You can generate the most suitable basic slicer settings depending on your needs and your printer's properties.	Control		
	Max No. of Cores 16 🗢 Priority Normal 🗡	Easy mode	Slice!

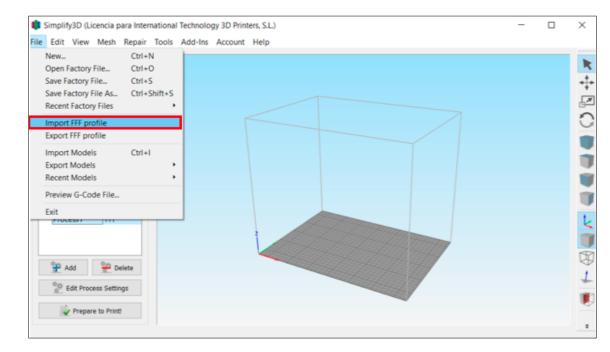
5. Regarding the printing temperature, we must go to the **Temperature** tab, configure the **Head Temperature** parameter at 200°C and deactivate the **Bed Temperature** option.

O Slice											×
Easy Tweaker				Presets							
Print quality	Printer		Material	Voladd B	old*						
🔵 Ultra	Nozzle Size	0.6 mm 🔻	Material PLA	Loa	t S	tore	Delete	Load Do	efaults Imp	oort	Export
High	Build Plate	Kapton 👻	Hoterior Por	Basic	Advanced	Foundatio	n Tempo	erature	GCode D	ual Extruder	
Medium	Hotend	Regular 🔹 🔻	Apply	✓ Fan S				Heating			
Preview				Speed	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		100 % 🤤	<u> </u>	Temperature	0 °C 🚖	✔ Wait
					Fan on First		B layers ≑		d Temperature	200 °C 🚖	✓ Wait
								Order		Bed first	-
						✓ Hea	t up Simultaneo	usly			
		JAC						Leav	ve the Heat on		
			are.								
Hints											
Easy Twe	eaker										
			settings depending	Control							
on your needs a	anu your printe	r s properues.		Max No. o	f Cores 16	Priority No	rmal 🔻		Ea	isy mode	Slice!



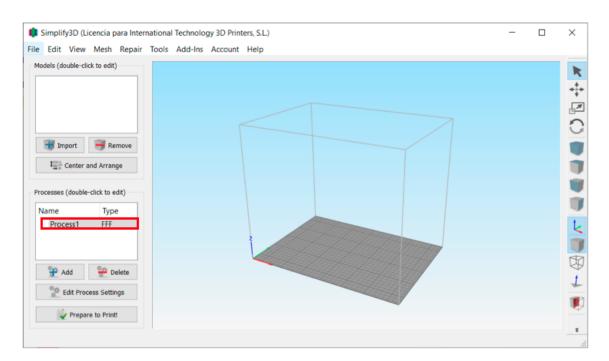
Simplify3D presets

To configure the printer in Simplify3D we will have to import the profile corresponding to Voladd in the following way.



1. Access to File / Import FFF profile.

- 2. Select file Voladd_Simplify3D.fff
- **3.** Access to the **Process**.





4. Select profile and then Auto-Configure Extruders drop-down select the Bold or Fine (normal) nozzle to adjust the Nozzle Diameter.

FFF Settings				? ×
Process Name: Process1				
Select Profile: Voladd	T	Update Profile	Save as New	Remove
Auto-Configure for Material	Auto-Configure for Print Quality	Auto-Configure	e Extruders	
PLA	Medium 👻 🖸	Bold Bold Normal		-
Infill Percentage:		100%	Include Raft	Generate Support
Extruder Layer Additions Infill Support	Temperature Cooling G-Code Scripts S	peeds Other Ad	vanced	^
Edruder List (click item to edit settings) Voladd Cartridge	Voladd Cartridge Toolhe Overview Extruder Toolhead Index Tool 0 Nozzle Diameter 0,60 \$ mm Extrusion Multiplier 1,00 \$ Extrusion Width Auto Manual 0,60	ead •		
Hide Advanced Select Models	Ooze Control Retraction Retraction Distance Extra Restart Distance Retraction Vertical Lift			OK Cancel



Sending GCode

In order to send a GCode file previously generated to our Voladd printer, we will follow the following steps:

Voladd	- 0	\times
File View		
		^
		- 1
		- 1
		- 1
Ma	nage printer	- 1
		. 1
		. 1
	voladdce341	
	(ip: 172.26.0.129)	
	SETTINGS	
		-
State	Print	
State: Waiting for user Wifi: MiFibra-1A7E		
Firmware version: 2.14	UPLOAD FILE	
Co	nnect to another printer	
	SEARCH PRINTERS	
_		
co	NNECT IN ADHOC MODE	

1. Select Upload File

2. Once the file is selected and uploaded the following warning message will appear.

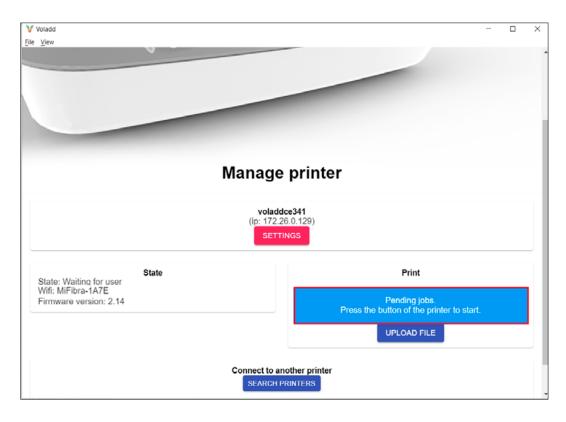


• IMPORTANT: If the Voladd printer is disconnected from the Wifi network or the Ethernet cable while sending the file to print, the following message will be displayed, so the network connection should be checked.

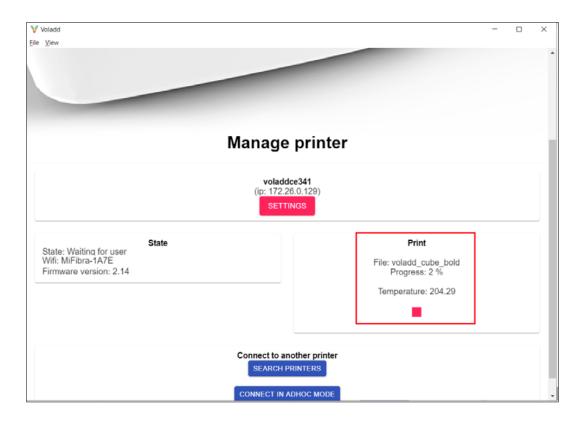
Voladd	×
An error ocurred connecting to printer. If error continues, try to search connect again in 20 seconds.	and connect again. It will try to
	Aceptar



3. Next, we will press the multifunction button on the printer to start sending the file to print, heat the extruder and start printing.



4. Once started the file name and percentage of printing progress will be displayed.





Cancel print

In order to cancel a print we have two ways:

- **1.** Holding down the multifunction button until it changes to orange, finishing printing.
- **2.** Using the STOP button to finish printing from the application, displaying the following message.

Voladd		×
Are you sure about cancelling the job	? You will lose the printing	process.
	Aceptar (lancelar

Uploading a new GCode file will overwrite the old one that we send to the printer



Basic recommendations

Follow this warning information to prevent accidents and to guarantee the safe and correct use of Voladd.



Heated surface

The head nozzle can be heated up to 240°C, therefore caution is recommended.

Make sure you have good wifi coverage so that Voladd correctly communicates with the platform.

Risk of entrapment

Place Voladd on a firm surface without any vibration.

Do not tamper with any mechanical part of the printer while it is operating.

Take special care with the platform. Do not put your hand or any object under it due to risk of entrapment.

Place Voladd in an environment without drafts and with an ambient temperature between 15°C - 25°C, and without direct sun exposure.

Correct Disposal

Follow the installation instructions and start the printer.

The presence of this symbol in the product, accessories or informative material indicates that nor the product nor the accessories should be eliminated along with other domestic waste

For more information about the environment commitment of Voladd and the specific obligations with certain normative of the product.

Do not expose the printer to impact, shock, or sudden movements.

Use the power supply and cartridges supplied by the manufacturer.

Be careful when folding the methacrylate bed.





Para más información visítenos en **it3d.com**

