

Accessories

As an addition to the regular VersaLASER, we offer a wide variety of optional accessories. **Before attempting to use any of the accessories in this section, make sure that you are comfortable operating the VersaLASER, the VCP, and your graphics software.**

Cylindrical Object Rotary Accessory (CORA)

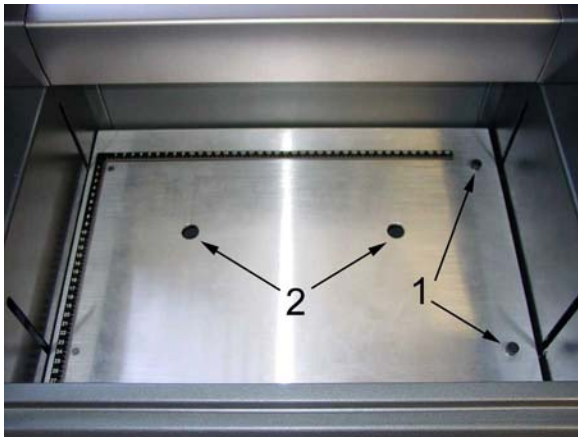

This accessory allows the VersaLASER to be quickly reconfigured to etch, scribe, or cut (material dependent), cylindrical objects such as glassware, etc.

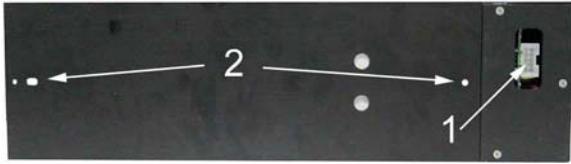
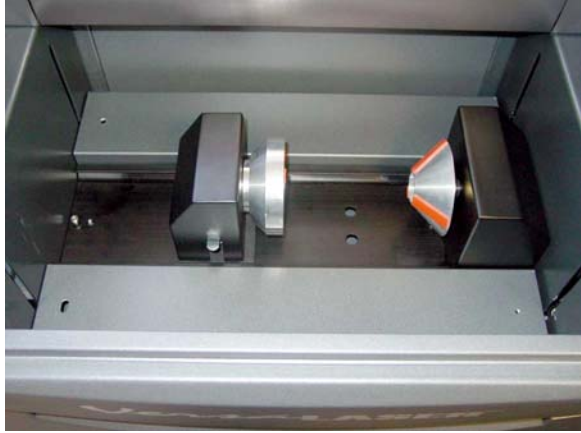


NOTE: If this is your first time using the CORA, we highly recommend that you practice this procedure several times on some inexpensive scrap material before attempting to etch the actual object.

Installation



Lower the table all the way down to the bottom of its travel or down far enough so that you can remove the table and install the CORA without interfering with the moving parts of the VersaLASER.

	
<p>Remove the table by loosening the two captive thumbscrews (1). Insert your fingers into the two holes (2) and slowly lift the table out of the VersaLASER being careful not to bump it around.</p>	<p>Inside the VersaLASER you will find the large recessed slot with a self-aligning electrical connector to the right side (1) and the two alignment pins (2).</p>

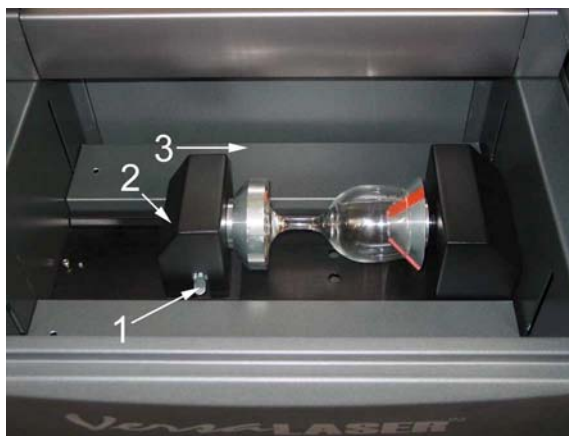
	
<p>On the underside of the CORA notice the self-aligning electrical connector (1) and two alignment holes (2).</p>	<p>Insert the CORA into the slot (OK to do with the power on because it is hot swappable) and move it around until the connector engages, the pins protrude through the alignment holes, and the fixture sits flat. It will indicate that it is installed properly by automatically rotating its cone slightly and a Rotary button will appear in the Focus tab of the VCP.</p>

Basic Operation

In this example, we are going to etch a simple drinking glass.

	
<p>Before loading the glass into the fixture, using a dry erase marker or some other marking device, make a mark on the glass where you would like the TOP CENTER point of the graphic.</p>	<p>Using a caliper or similar measuring device, measure the diameter across the area of the glass where you marked. Either remember this number or write it down.</p>

Lift the lever (1) on the adjustable end of the fixture (2) and slide it to the left, out of the way. Place the open end of the glass into the cone, and slide the adjustable end of the fixture to the right (3) up against the base of the glass so the glass rests firmly centered inside of the inverted cone. Apply light pressure to the right, only enough force to prevent the glass from slipping while it rotates, and push the lever down (1) to lock it in place. By hand, rotate the cone or the glass, until your mark points as straight up as possible. The electrical power to the CORA motor is lowered when it is sitting idle so that you can rotate the cone of the fixture easily. This is OK and will not damage the CORA.



Click the Rotary button in the Focus tab of the VCP. This will bring the X-axis arm directly over the centerline of the fixture and will also turn on the Red Dot pointer. Align the Red Dot pointer with the center of your mark by using your mouse to click on the main window in the Focus tab of the VCP. Notice that your Y-axis coordinates will be locked in place and you can only click left and right (in the X-axis direction). The Red Dot will move to the location where you clicked (or type in the coordinates in the X-Axis and Y-Axis boxes and click Move). Adjust the position of the Red Dot until it lines up with your mark, left and right. If your mark does not line up with the Red Dot in the rotational direction, simply grasp the glass or the cone and manually rotate it while it is in the fixture.

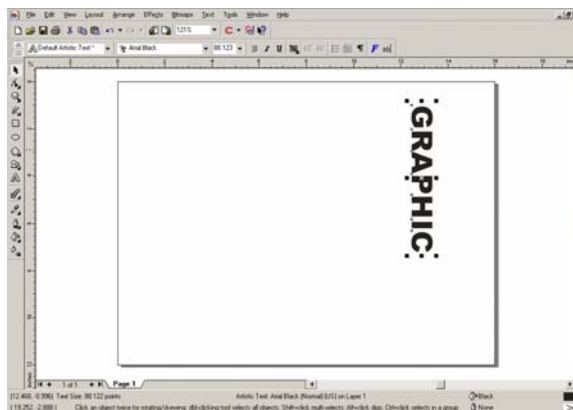


Continue repositioning until the Red Dot is on top of your mark. When it is aligned, in the VCP, locate the X-axis coordinate number. Either write this number down or remember it. This is the coordinate of the Red Dot pointer and it is also where you will need to position your graphic. Ignore all other coordinates.

Graphics Setup

Open your graphics software. In this case we will use CorelDRAW12 and create a new graphic.

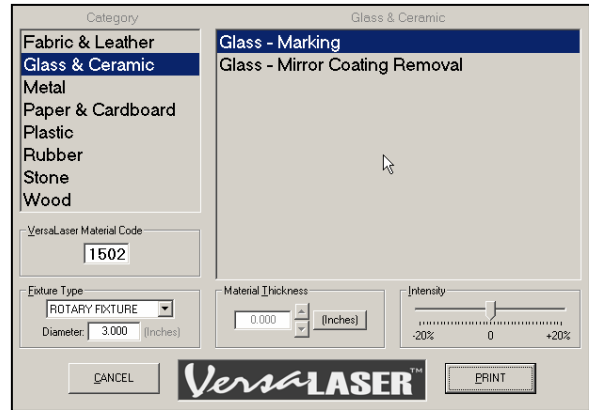
Using the Transformations menu, rotate your graphic 90 degrees to the right to match the glasses orientation. Reposition your graphic so that its **RIGHT CENTER** anchor point, which was the **TOP CENTER** before we rotated it 90 degrees, is located at the same X-axis coordinate as the Red Dot pointer. The vertical placement of where you position your graphic within your graphic software is irrelevant because the VCP will automatically match the vertical center of the graphic with the mark you placed on the glass. Just make sure that the graphic is positioned within the printable page area.



Printing

WARNING: The following steps are critical. Make sure that you enter the correct information otherwise the VersaLASER might not only adjust the Z-axis and scale the graphic incorrectly, which can ruin your material, but it can also damage itself if the moving parts of the X-axis crash into the CORA.

Print as if you were etching a flat object. When the VersaLASER Settings dialog box pops up, choose your category and type of material as usual. In the Fixture section, select CORA from the dropdown list and also type in the diameter of the glass that you measured earlier and click print. As usual, the print job will be stored on your hard disk and become available in the VCP as the next job ready to be processed.



For each glass that you would like to etch your graphic in a precise location, you must follow each of the steps from the beginning of this section. If it does not matter to you if the etching begins anywhere around the circumference of the glass, then simply load the next glass and run the job again without having to make any marks or lining up the Red Dot.

Once you have practiced using the CORA, you will naturally come up with some shortcuts to save on setup time.

Vector Cutting Accessory (VCA)

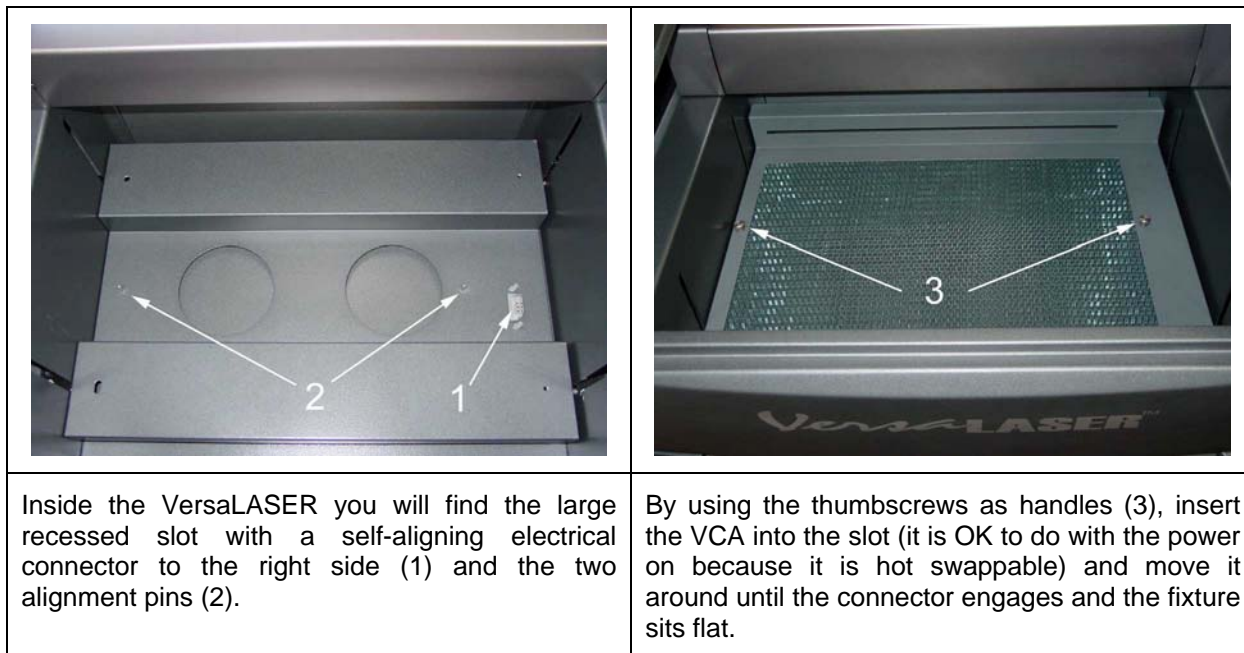
The Vector Cutting Accessory, with its honeycomb design, assists with the vector cutting of materials by minimizing the surface contact area of the backside of the material. This simple yet functional design also provides a slight vacuum for sheet stock to hold it flat while cutting, and it assists with smoke removal by drawing it down and underneath the material.



Installation

Lower the table all the way down to the bottom of its travel or down far enough so that you can remove the table and install the VCA without interfering with the moving parts of the VersaLASER.

Remove the table by loosening the two captive thumbscrews (1). Insert your fingers into the two holes (2) and slowly lift the table out of the VersaLASER being careful not to bump it around. On the underside of the VCA find the self-aligning electrical connector (3) and two alignment holes (4).



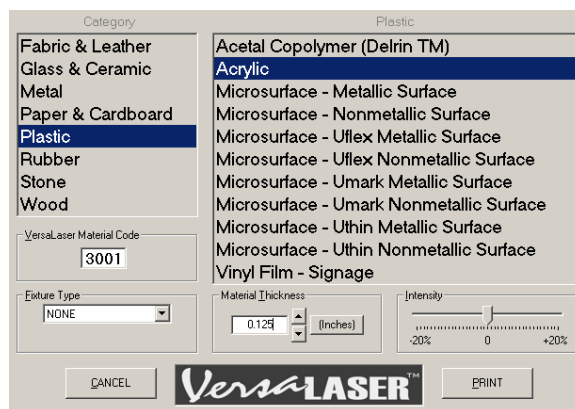
Graphics Setup

Open your graphics software. In this case we will use CorelDRAW11 and create a new graphic. Layout your graphic the same way as if the regular table is installed.

The border of the honeycomb material of the VCA is slightly larger than the printable area of the VersaLASER. Since there are no reference rulers attached to the table, if you desire, you can use the Red Dot pointer as your positioning reference.

Printing

Print as normal. When the VersaLASER Settings dialog box pops up, choose your category and type of material as usual. In the Fixture section, select **NONE** from the dropdown list. Using a caliper or similar measuring device, measure the thickness of your material and enter it into the Material Thickness box and click Print. As usual, the print job will be stored on your hard disk and become available in the VCP as the next job ready to be processed. The VersaLASER automatically knows that the VCA is installed and it will automatically compensate for the focus height difference. Place your material directly on the VCA and proceed to cut.



Note: You may experience a slight “notching effect” on the backside edge of the material. This is due to the reflectivity of the honeycomb material and is normal. To reduce the effect, try reducing the Intensity setting. To completely eliminate the effect, you may want to elevate your material off of the honeycomb by using some sort of spacers, at least 1/8th to 1/4 inch thick, between the honeycomb surface and your material that does not interfere with the beam path. If you are to do this, be sure to select Custom for the Fixture type and enter the thickness of your spacer in the Height box.

Integrated Cart

Features:

- Size: 25"W x 22" D x 30"H / Weight: 95 lbs
- Maximum stability at low cost / Powder-coated, durable construction
- Four "foot" ports to secure the VersaLASER to the cart to prevent slipping (1)
- Two large storage drawers (2 & 3)
- Locking casters for moving convenience (4)



Installation

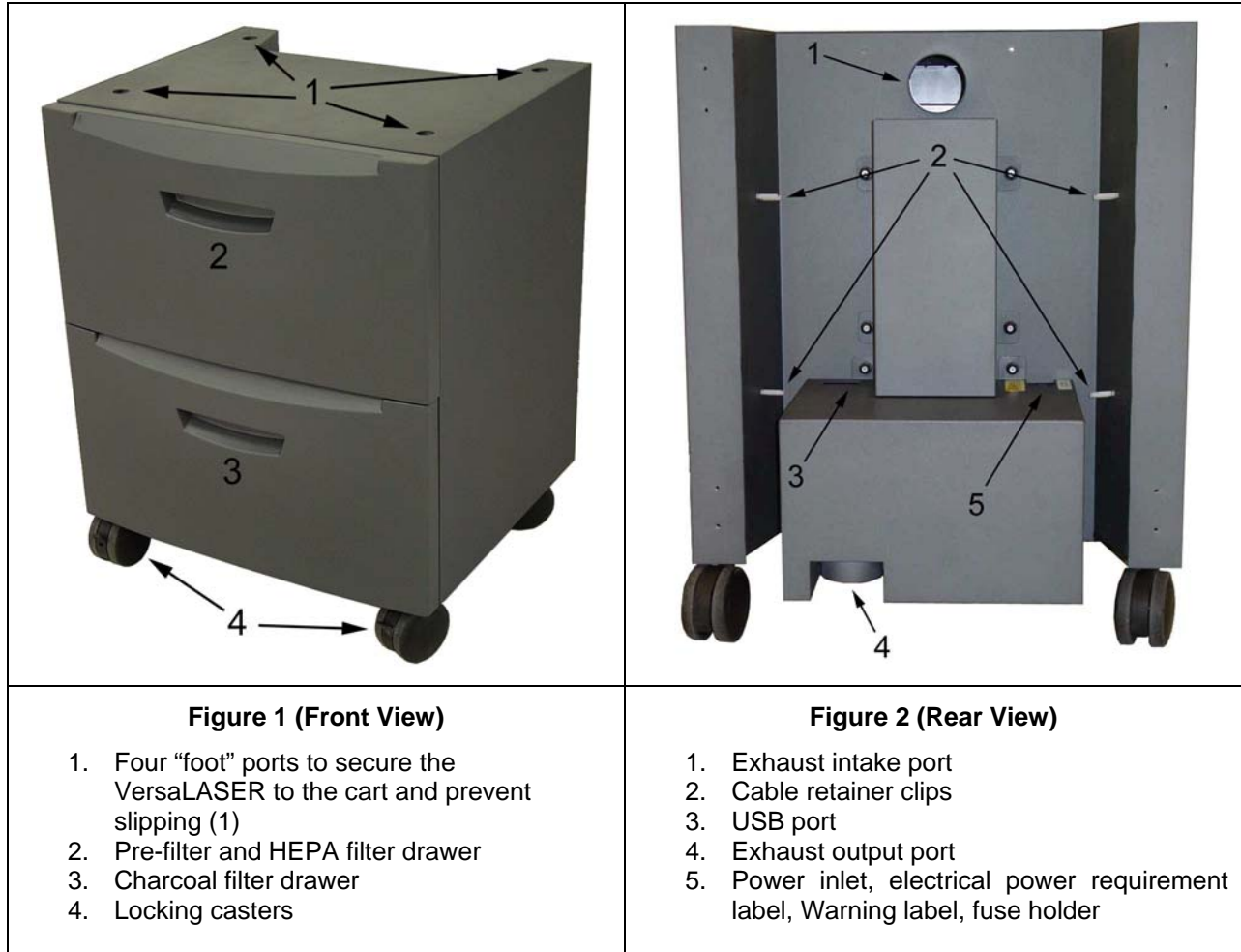


- Push down on the tabs of the locking casters so that the cart does not roll.
- Obtain the assistance of another person. One person should grasp the front of the machine and place his hands where the arrows indicate. The other person should stand in the back of the machine and place his hands where the arrows indicate.
- Pick up the VersaLASER, place it on top of the cart and locate the VersaLASER's four feet into the four, foot ports.
- If this is the first time you will be making connections to the VersaLASER, proceed back to Section 2 to complete the installation process.

Computer Controlled Air Cleaner / Cart (CCAC)

Features

- Size: 25"W x 22" D x 30"H / Weight: 200 lbs
- Eliminates smoke, dust and fumes from processing.
- Controlled through a USB port connected to the VersaLASER and is activated only when jobs are in process
- Filters are concealed within the two drawers
- Foot ports to secure the VersaLASER to the cart to prevent slipping
- Powder-coated, durable construction
- Locking casters for moving convenience



How it works

This device contains a pre-filter to remove coarse (larger) particulates, a HEPA filter to remove fine (smaller) particulates, an activated charcoal filter to remove fumes and odors, and a high-pressure vacuum motor to pull these byproducts through the filters. It also serves as a moveable base, or stand, for the VersaLASER. To reduce noise, minimize electrical consumption, and prolong filter life, the CCAC is controlled from the VersaLASER via a USB cable. The VersaLASER powers on the CCAC when processing begins and powers it off a few seconds after the processing completes to remove any remaining particulates, fumes, or smoke.

NOTE: When the filters are reaching their useful life, the VCP software will prompt you and inform you how much of a percent of its useful life has expired, starting at 85%. That would be a good time to reorder filters.

The air cleaner is recommended only if you have no other choice than to filter the exhaust. Keep in mind that it is designed as a light-duty device and heavy usage will result in the high consumption rate of the filters.

Installation



- Push down on the tabs of the locking casters so that the cart does not roll.
- Obtain the assistance of another person. One person should grasp the front of the machine and place his hands where the arrows indicate. The other person should stand in the back of the machine and place his hands where the arrows indicate.
- Pick up the VersaLASER, place it on top of the cart and locate the VersaLASER's four feet into the four, foot ports.

Making the Connections



NOTE: Before continuing, you MUST have completed Section 2 of this manual which includes loading the VersaLASER Installation Software. If not, go back to that section, complete the installation, and return here.

- Connect the short exhaust hose and secure it with the provided hose clamps (1) and install the sheet metal cover over the exhaust hose.
- Make sure your computer is powered on and booted into Windows.
- As instructed in Section 2 plug in a power cord to the VersaLASER's power inlet (6) and attach a USB cable from your computer to the VersaLASER USB port 1.
- Plug in a power cord to the CCAC's power inlet (5) and then connect a 3 ft. USB cable between the second USB port (2) of the VersaLASER and the USB port located towards the bottom of the CCAC (3). **NOTE: Windows will indicate to you that it has recognized the device by powering it on for about 5 seconds and then automatically turning it off. Once this occurs, it is ready for use. If Windows does not recognize the device it will prompt you for the device driver disk again. Insert your VersaLASER Installation CD-ROM and follow the on-screen instructions.**
- Secure the USB cable using the retainer clips (4).

Computer Controlled Compressed Air Unit

This integrated accessory provides dry, oil-free compressed air to protect the VersaLASER's optics and assist with cutting and etching of materials that tend to flame up or produce heavy quantities of smoke or debris. It **MUST** be used in conjunction with either the Air Assist Cone or AABS accessories. The Air Compressor is designed to automatically power on when the VersaLASER starts a print job, and then power off automatically and finishes it.



WARNING: The use of compressed air **IS NOT** intended to decrease maintenance of the VersaLASER. Actually, it has been known to increase the frequency of cleaning maintenance due to debris being blown around, inside the machine, during processing.

This device is not intended for continuous use (longer than 20 minute jobs), nor high-humidity environments, otherwise serious damage to the compressor may occur. If you need an air unit capable of heavy duty use and/or high humidity environments, please contact our Sales Department.

Features

- Size: 12"W x 6" D x 14"H / Weight: 14 lbs
- Controlled through a USB port connected to the VersaLASER and is activated only when jobs are in process
- An air dryer is integrated into the unit to remove the moisture that can damage the optics.
- Noise insulated for quiet operation.
- Powder-coated finish, durable construction.

Installation

<p>Push down on the release lever of the fitting on the back of the VersaLASER until it "clicks" (1). Insert one end of the blue hose into the fitting until it also "clicks".</p>	<p>Connect the other end of the blue hose to the Air Compressor (1) in the same fashion. Plug in a power cord from your power source to the power inlet (2) of the CCCAU.</p>

NOTE: Before continuing, you **MUST** have completed Section 2 of this manual which includes connecting the USB cable and power cord to the VersaLASER and loading the VersaLASER Installation Software. If not, go back to that section, complete the installation, and return here.

- Make sure your computer is powered on and booted into Windows.
- Connect a 3 ft. USB cable between the VersaLASER's USB port #3 and the USB port located towards the bottom of the CCCAU. **NOTE: Windows will indicate to you that it has recognized the device by powering it on for about 5 seconds and then automatically turning it off. Once this occurs, it is ready for use. If Windows does not recognize the device it will prompt you for the device driver disk again. Insert your VersaLASER Installation CD-ROM and follow the on-screen instructions.**

Periodic Maintenance



At least once per month, check the condition of the two filters on the back of the device. If they are plugged, simply remove them by snapping off the cover, removing the filter media, washing it out with ordinary soap and water, dry the filters, and re-install. If the filters remained relatively clean, adjust your maintenance schedule accordingly.



Below the device you will find a tray. With your hands, slide the tray forwards. Inside the tray you will find sponges that are designed to absorb the water that was generated from condensation. In humid areas you may need to check the sponges more than once per week. In drier areas it is possible to extend that period. Check them at least once per week and adjust your schedule accordingly. The sponges may need to be cleaned with soap and water and dried out, or replaced.

Air Assist Cone (AAC)

This accessory also requires the CCCAU.

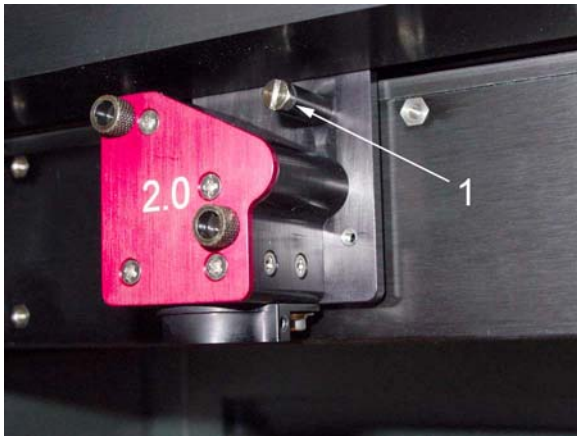


seconds.

NEVER install the AAC without having the CCCAU installed and operating, and **NEVER** shut off the needle valve completely. The lack of pressurized air present in the cone, during processing, will allow smoke to contaminate the lens and can destroy it within



The cone attaches to the base of the Focus Carriage and will force air directly onto the surface of your material to reduce the burning effects of the material from the laser beams intense heat. It also helps disperse the smoke and gases that are created from the processing of materials. It contains a needle-valve assembly to control airflow through the cone.

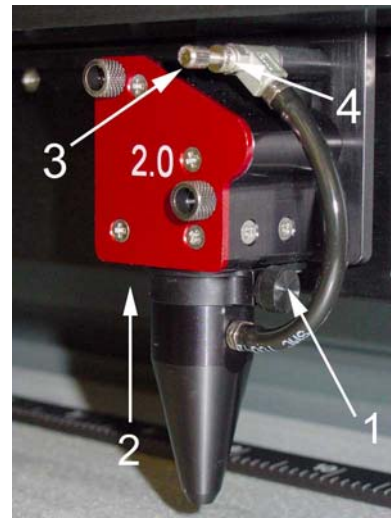
Installation

Lower the table down far enough so that you can attach the cone. Power off the VersaLASER. By hand, move the X-axis arm and Focus Carriage to a comfortable working position in the field. Remove (if present) the plug (1) with a screwdriver.



Using a 3/16 socket tool or 5mm wrench, attach the needle valve to the port where you removed the plug. Be careful not to cross-thread the small device when installing and do not over tighten it.

Loosen the thumbscrew (1) on the side of the Focus Carriage (if already attached). Insert the cone (2) by pushing it straight up into the bottom of the Focus Carriage ensuring that it is up all the way and is seated properly, and gently tighten the thumbscrew. If this is the first time using the cone, open the needle valve (3) all the way, counter clockwise. This will result in maximum airflow through the cone. To lock the adjustment in place, rotate the round locking nut (4) clockwise until it seats.

**Usage**

Power on the VersaLASER and run a job. Make sure that the CCCAU unit turns on (if purchased) or your compressed air source is operating when the job starts processing. Observe how the smoke is pushed away from the tip of the cone. If you would like to reduce the flow, pause the job and adjust the needle valve as necessary.



NEVER install the AAC without having the CCCAU installed and operating, and **NEVER** shut off the needle valve completely. The lack of pressurized air present in the cone, during processing, will allow smoke to contaminate the lens and can destroy it within seconds.

Removal

Loosen the thumbscrew and pull the Cone downwards. Leave the thumbscrew attached to the Focus Carriage by re-tightening it so that it doesn't get lost. Either detach the accessory by unscrewing the needle valve and reinstalling the plug (the same way you installed it), or by the preferred method of un-attaching the hose from the needle valve by either using a wrench to loosen the nut at the end of the hose or by simply using the cone as your wrench and turning it counter clockwise. This way, the needle valve remains attached to the Focus Carriage for the next time you install the Cone. The same needle valve is also used for the AABS accessory.

Air Assist Back Sweep (AABS)

This accessory also requires the CCCAU.

The AABS attaches to the Focus Carriage and is used to force compressed air either directly onto the surface of your material, from an angle, or it can be adjusted to where it can blow the smoke straight back to the Exhaust Plenum or at various, user defined angles. This accessory can be used to reduce the burning effects of the material from the laser beams intense heat, or to direct the smoke away from the beam during processing. It contains a needle-valve assembly to control airflow, one height adjustment, and one angle adjustment.

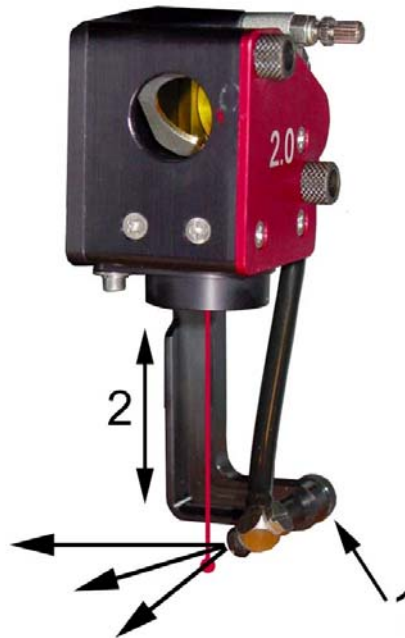


Installation

<p>Lower the table down far enough so that you can easily attach the AABS. Power off the VersaLASER. By hand, move the X-axis arm and Focus Carriage to a comfortable working position in the field. Remove (if present) the plug (1) with a screwdriver. Attach the mounting block (2), if not already attached, with the 4-40 screw and using a 3/32 Allen wrench.</p>	<p>Using a 3/16 socket tool or 5mm wrench, attach the needle valve (1) to the port where you removed the plug. Be careful not to cross-thread the small device when installing and do not over tighten it. Attach the AABS (2) to the mounting block using the thumbscrew (3) and making sure that it is adjusted so that it is as high up (4) as possible.</p>

Power on the VersaLASER. Load some scrap material of the same type you intend to process and set focus using the Focus Tool. Adjust the angle of the nozzle by loosening the thumbscrew (1), rotating the bracket, and re-tightening the thumbscrew. You can also adjust the height (2) by loosening the mounting thumbscrew, making the adjustment and re-tightening the thumbscrew. Use the Red Dot pointer as your guide to where the laser beam will strike the material.

WARNING: Since the AABS hangs downwards toward the surface of your material and the surface of the table, ensure that the motion of the Focus Carriage will not cause the AABS to mechanically interfere with your material or components of the VersaLASER otherwise serious damage may occur.



Usage

If this is the first time using the AABS, open the needle valve all the way, counter clockwise. This will result in maximum airflow. To lock the adjustment in place, rotate the round locking nut clockwise until it seats.

Load and run a job. Make sure that the CCCAU unit turns on (if purchased) or your compressed air source is operating when the job starts processing. Observe how the smoke is being pushed away. If you would like to reduce the flow or to change the angle or height of the airflow, pause the job and adjust as necessary.

Removal

Remove the height adjustment thumbscrew and detach the AABS from the mount. Re-attach the thumbscrew to the mount so that it doesn't get lost. Either detach the accessory by unscrewing the needle valve and reinstalling the plug (the same way you installed it), or by the preferred method of un-attaching the hose from the needle valve by either using a wrench to loosen the nut at the end of the hose or by simply using the cone as your wrench and turning it counter clockwise. This way, the needle valve remains attached to the Focus Carriage for the next time you install the accessory. The same needle valve is also used for the AAC accessory.