Section 16: Specifications

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Epilog Mini 18 x 12 Specifications

Maximum Engraving Area	18" x 12" (457 x 305 mm)
Maximum Material Thickness	4" (101.5 mm) - 6” (152 mm) with Task Plate and Vector Grid removed
Laser Control Display Panel	Displays stored file names, speed, power, runtime and more.
Intelligent Memory Buffer	Store unlimited files up to 64 MB. Rolling buffer allows files of any size (64 MB and larger) to be engraved.
Operating Modes	Optimized raster engraving, vector cutting, or combined raster/vector mode.
Motion Control	High speed, continuous loop, DC servomotors using linear encoding technology for precise positioning.
Laser Source	State-of-the-art, digitally controlled, air-cooled CO2 laser tubes are fully modular, permanently aligned, and field replaceable/upgradeable.
Bearings	Ground and polished stainless steel NeverWear™ bearing system.
Belts	Advanced B-style Kevlar precision drive belts.
Resolution	User controlled choice of 75, 150, 200, 300, 400, 600, or 1200 dpi.
Speed/Power Control	Computer or machine controlled Speed and Power in 1% increments to 100%. Color mapping links Speed and Power setting to any RGB color.
Print Interface	10 Base T Ethernet or USB 1.0 connections. Compatible with Windows XP, 2000 or 32 bit Vista.
Standard Features	Red Dot Pointer, Air Assist (pump optional), Auto Focus, 2" focus lens, relocatable home, flash upgrade electronics.
Size/Weight	27.5" wide x 23" deep x 12.5" high (699 x 584 x 318 mm) 70 lbs (32 kg)
Electrical Requirements	Auto-switching power supply accommodates 100 to 240 VAC, 50 or 60 Hz, single phase, 15 amp AC.
Ventilation	External exhaust to the outside required. Output diameter at machine is 4" (100 mm).
Safety	CDRH Class IIIR
Max Ambient Room Air	90 degrees F (32 C) Max Temperature

Epilog Mini 24 x 12 Specifications

Maximum Engraving Area	24" x 12" (610 x 305 mm)
Maximum Material Thickness	6" (152 mm) - 8" (203 mm) with Task Plate and Vector Grid removed
Laser Control Display Panel	Displays stored file names, speed, power, runtime and more.
Intelligent Memory Buffer	Store unlimited files up to 64 MB. Rolling buffer allows files of any size (64 MB and larger) to be engraved.
Operating Modes	Optimized raster engraving, vector cutting, or combined raster/vector mode.
Motion Control	High speed, continuous loop, DC servomotors using linear encoding technology for precise positioning.
Laser Source	State-of-the-art, digitally controlled, air-cooled CO2 laser tubes are fully modular, permanently aligned, and field replaceable/upgradeable.
Bearings	Ground and polished stainless steel NeverWear™ bearing system.
Belts	Advanced B-style Kevlar precision drive belts.
Resolution	User controlled choice of 75, 150, 200, 300, 400, 600, or 1200 dpi.
Speed/Power Control	Computer or machine controlled Speed and Power in 1% increments to 100%. Color mapping links Speed and Power setting to any RGB color.
Print Interface	10 Base T Ethernet or USB 1.0 connections. Compatible with Windows XP, 2000 or 32 bit Vista.
Standard Features	Red Dot Pointer, Air Assist (pump optional), Auto Focus, 2" focus lens, relocatable home, flash upgrade electronics.
Size/Weight	34.5" wide x 22.5" deep x 16" high (876 x 572 x 406 mm) 90 lbs (40 kg)
Electrical Requirements	Auto-switching power supply accommodates 100 to 240 VAC, 50 or 60 Hz, single phase, 15 amp AC.
Ventilation	External exhaust to the outside required. Output diameter at machine is 4".
Safety	CDRH Class IIIR
Max Ambient Room Air	90 degrees F (32 C) Max Temperature

Epilog Helix Specifications

Maximum Engraving Area	24" x 18" (610 x 457 mm) – 23.5”x 17” with Task Plate and Vector Grid removed
Maximum Material Thickness	9" (229 mm) - 11” (279 mm) with Task Plate and Vector Grid removed
Laser Control Display Panel	Displays stored file names, speed, power, runtime and more.
Intelligent Memory Buffer	Store unlimited files up to 64 MB. Rolling buffer allows files of any size (64 MB and larger) to be engraved.
Operating Modes	Optimized raster engraving, vector cutting, or combined raster/vector mode.
Motion Control	High speed, continuous loop, DC servomotors using linear encoding technology for precise positioning.
Laser Source	State-of-the-art, digitally controlled, air-cooled CO2 laser tubes are fully modular, permanently aligned, and field replaceable/upgradeable.
Bearings	Ground and polished stainless steel NeverWear™ bearing system.
Belts	Advanced B-style Kevlar precision drive belts.
Resolution	User controlled choice of 75, 150, 200, 300, 400, 600, or 1200 dpi.
Speed/Power Control	Computer or machine controlled Speed and Power in 1% increments to 100%. Color mapping links Speed and Power setting to any RGB color.
Print Interface	10 Base T Ethernet or USB 1.0 connections. Compatible with Windows XP, 2000 or 32 bit Vista.
Standard Features	Red Dot Pointer, Air Assist (pump optional), Auto Focus, 2" focus lens, relocatable home, flash upgrade electronics.
Size/Weight	36.5" wide x 29" deep x 39" high (927 x 737 x 991 mm) 180 lbs (80 kg)
Electrical Requirements	Auto-switching power supply accommodates 100 to 240 VAC, 50 or 60 Hz, single phase, 15 amp AC.
Ventilation	External exhaust to the outside required. Output diameter at machine is 4".
Safety	CDRH Class IIIR
Max Ambient Room Air	90 degrees F (32 C) Max Temperature

Compatibility

The Epilog Mini/Helix has been designed as an "open architecture" product. The laser will work with many popular Windows based graphics, engineering and specialty software products. To benefit from all the functionality that was built into the laser, a Windows 32 bit based PC and 32 bit operating system is required. The Dashboard print driver that is shipped with the laser offers a host of unique features, and only works with Windows based operating systems.

Recommended PC

For Optimum Computer Performance

Investing in a new computer is a great way to make sure you're getting the most out of your new laser equipment. Why? Because today's software (CorelDraw for instance) requires a lot of computer processing speed and memory to function properly. A good computer won't make a big difference in how your laser runs, but when compared to a slow computer it will save untold amounts of time and frustration setting up the artwork that you "print" to the laser. Many users do not purchase new computers for use with their new laser because their current computers are perfectly adequate. There's no magical cut-off that makes a computer too slow. If you're comfortable with the performance and speed of your current computer, there's probably no reason to purchase another one. The following recommendations are just advice to consider if a new computer is necessary.

A new computer doesn't have to be expensive to work great! Even many of today's lower cost computers work great for laser applications. As long as you don't buy the cheapest computer you can find you should be fine.

Read these recommendations and consider spending just a few dollars more for those components that will save you time and frustration.

Operating System

Any Windows XP, 2000, or Vista operating system is recommended. All new Epilog lasers are designed to work with all the different 32 bit versions of XP, 2000, and Vista.

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RAM – Random Access Memory

2 GB is the minimum that is recommended. RAM is kind of like short-term memory. It's fast and readily available for the computer to access and makes time consuming tasks go much quicker if you have lots of it. Having more than 2 GB of RAM is nice if you demand a lot from your computer.

CD-ROM /CD-RW/DVD (optical drive)

All computers come with some sort of CD-ROM/DVD drive. Consider a computer with Read/Write capability. Many graphic files are very large and may not fit on some portable media. Being able to copy a file to a CD or DVD is a big advantage for filing purposes and moving the file from one computer to another. Optical drives are an indispensable tool.

Floppy Drive

Usually not necessary.

Processor Speed

A faster processor will allow you to do more tasks in less time. While it's not necessary to purchase the fastest processor available, you'll want adequate speed to operate your graphics program. Processor speeds are always improving, but processor speeds of about 2.0 GHz or faster are a good place to start.

10/100 Network Interface Card (NIC)

All new computers have a 10/100 network connection as standard equipment. As well as allowing multiple computers to be linked together in a network, this technology also allows direct printing from the computer to the laser. Epilog supplies a network Crossover cable with each laser system that allows one computer to print to a single Epilog laser system.

Hard Drive

This is the permanent memory in your computer. Many users feel that you can never have a large enough hard drive, but for most laser applications 80 GB's is going to be adequate for years of storage. Luckily, most computer manufacturers put high capacity drives in new computers these days. When in doubt, buy bigger than you think you might need. It's so in-expensive that it's worth the peace of mind to have it available.

Software

Many users use Corel as their graphics software. Many other Windows software applications can also be used, although all software is different and may not be

predictable, user friendly or functional. Additionally, the technical support staff at Epilog may be less familiar with software other than Corel and less able to help with questions. Consult with your Epilog distributor on software compatibility issues. Epilog does not guarantee compatibility with any software.

Many laser users find a Raster-to-Vector conversion software package indispensable. Sometimes, users may have this capability if they are using sign graphics software like CadLink. There are also a number of 3rd party Raster-to-Vector conversion packages available in the engraving industry. Corel includes a raster-to-vector conversion program starting in version X3 and it is a very nice conversion program for most users.

Other Computer Hardware Recommendations

Scanner

A flatbed scanner is another indispensable tool for generating custom artwork. Almost any flatbed scanner today is adequate for scanning artwork. Scanner technology has come so far in the last few years that even a $100 scanner today is as good as a $1,000 scanner of a few years ago. Hand held “mouse” scanners do not provide the necessary accuracy and should be avoided.

Heavy Duty Surge Protector

The need for a surge protector varies greatly throughout the world. If the laser is operated anywhere that the electrical power is subject to spikes, outages, lighting, fluctuations, etc. a surge protector should be used on both the laser and the computer. A surge protector is a very, very cheap insurance policy against catastrophic electrical damage. A surge protector is designed to be an inexpensive device that absorbs any electrical problems before they can damage the expensive equipment (computer and laser) they are protecting.

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Summary

Computer Recommendations:
Windows 2000, XP or 32 bit Vista
2 GB RAM minimum
CD-ROM or DVD
2.0 GHz or faster Processor
10/100 Network Interface Card
100 GB Hard Drive - (Minimum)
CorelDraw or other Windows based software

About The Laser

Your Epilog CO2 laser system uses the latest in waveguide laser technology to provide a powerful tool that is simple and safe to setup and operate. The Epilog laser can mark, engrave, and cut a variety of non-metallic materials.

The CO2 laser beam itself is invisible. The beam is about half the diameter of a #2 pencil. Unfocused, it will just make an ugly burn, leaving lots of charred material behind. The focus lens gives the beam an hourglass shape. At the center point the energy density is concentrated, allowing the very precise and clean material removal that is characteristic of laser engraving. The center of the hourglass is the "focal point".

The laser beam path is completely enclosed within the cabinet. Please do not disassemble or modify any of the covers or windows on the machine. If at any time you notice that the laser operates with a door or window open, please contact Epilog technical support immediately.

The laser has two basic operating methods. For cutting (vector), the laser is driven along a path and the laser is left on all the time. The path could be the outline of a letter or a geometric shape like a circle. The laser will cut entirely through the material, separating the part from the background. For marking (engraving), the laser is swept across the work from left to right, and the laser is turned on and off at the correct points to produce the first line of the image. Then the carriage advances one line and the process is repeated, eventually assembling a full image.

Federal Communications Commission (FCC) Notice



Note: 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 when the equipment is operated in a commercial environment. 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 his/her own expense.