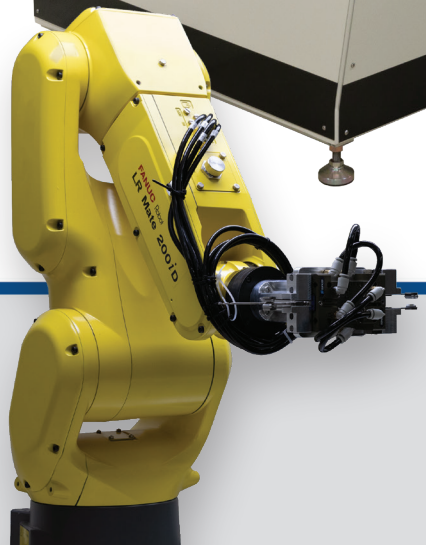
Vytek

Laser Marking • Welding • Robotic Solutions



Reliable, turnkey, fiber laser cutting systems designed with flexibility to meet the diverse needs of today's metal fabricator.

# Automate Your Shop

# Why Choose Vytek

*Highly accurate cutting capabilities combined with the industry's most energy efficient footprint.*

Vytek

For over 30 years, Vytek has been mastering the use of laser technology so you don't have to. We bring you the broadest possible range of engraving, marking and cutting solutions built to exacting standards, with common hardware and software components, that provide reliable performance for many years of profitable operation. We use a common controller across all product lines, fully integrated with industry leading professional software allowing you to rapidly produce single designs or production quantities with ease seamlessly even if you grow to use multiple Vytek systems. Overall, Vytek now offers the widest range of laser solutions in a broad range of wavelengths from 10.6 um through 355.

MADE IN THE USA

www.vytek.com

# We Provide Solutions

## Engineering

Vytek's dedicated engineering group has over 100 years of combined experience. Using a fully integrated 3D design linking directly to the manufacturing department, prototype to productjion is measured in hours not days.

## Service

Vytek has 5 full time experienced support people dedicated to laser support.

Vytek supports you and the products via:

- On-site service
- Remote computer access
- Phone
- Email

# Laser Applications

*The ideal system for the widest range of laser marking requirements.*

## A More Environmentally Friendly Approach

Engraving using Fiber Lasers is a more environmentally friendly approach as inks and bit heads which are used with traditional techniques are no longer required. The fact that the process is contactless also has direct benefits of reduced "wear and tear" compared to the use of tools.

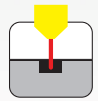
Popular Uses and Applications

Laser engraving is especially popular in jewellery manufacture and can be used to create works of art; there are also many industrial uses. Engraving

ENGRAVE

## Laser Engraving

Laser engraving is the process of removing a portion of material to leave an engraved mark which is visible beneath. The engraving process is produced by the Laser beam removing material to create a mark, where the Laser acts like a chisel and blows away selected areas of the subject material. It is a subset process of laser marking where the object is actually marked beneath the surface and is the most common of all the laser marking applications. The depth of the engraving made will depend on the dwell time as well as the type of material being used. It can be used on a variety of materials, including ceramics, plastics and all forms.

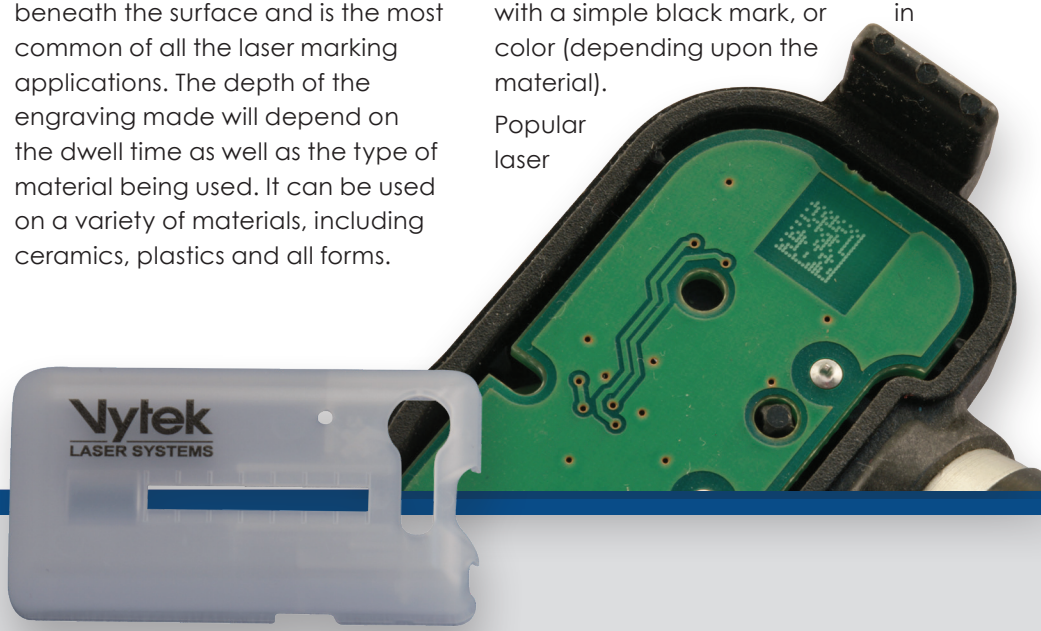


MARK

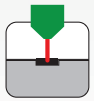
## Laser Marking

Pulsed Fiber Lasers are renowned for their versatility with laser marking being one of the most popular applications. Although similar to laser engraving, the appliance of a mark is at a surface level, whereas engraving is a mark with depth. Laser marking is the process where a material, which can be anything from ceramics, plastics, metals, LEDs, rubber, graphic composites, etc. is marked or labelled with a simple black mark, or in color (depending upon the material).

Popular laser

# Quality Production Capability



ABLATE

## Laser Ablation

Laser ablation is the process of precision layer removal by a laser. This could be the removal of a wide-range of materials ranging from solid metals, ceramics and industrial compounds. Ablation is popularly used in applications such as elements used within electronic products (e.g. semi-conductors and micro-processors) by irradiation with a Laser beam. The absolute precision of Fiber Lasers comes to the forefront with laser ablation, a process which has

WELD

## Laser Welding

Laser welding is the process of welding materials together, whether this is one piece or multiple pieces of similar or dissimilar materials. Renowned for the increased strengths of welds, laser welding is an application that businesses simply can't afford to ignore for quality and cost reasons.

### Industrial Uses

Laser welding solutions are most frequently used in high volume industries, such as the automotive industry and in manufacturing. The

CUT

## Laser Cutting

Laser cutting is one of many processes that have noticed a much more widespread use over recent years. Many of the laser-based processes have similar benefits and applications, and as one laser machine can perform multiple processes, it can be hard knowing exactly which one could be right for your business.

To make this a little easier, we have explored the process in greater detail below, looking at how the process works, the different types of laser cutting, its advantages, and where you'll see it most commonly used.

*Highly accurate welding capabilities combined with the industry's most energy efficient footprint.*



# *Laser U* is an Industry Leading Online Training Program

Our online Learning Management System (LMS) ensures total access to the latest training for your machine and selected options. Classes are customized based on the software, machine type and purchased options.

## Benefits of Online Learning

- Online training available 24/7. You do not need to wait for an available class to be scheduled.
- Training is customized for your solution.
- Training can begin before the equipment is delivered, so you are ready to hit the ground running as soon as the equipment arrives.
- Machine operators can work at their own pace. They don't have to wait for slower learners or try to keep up with faster learners.
- If a skill is not used for a while it is not lost. Lessons can taken again when needed.
- If an employee leaves, new employees can sign up and get up to speed quickly.
- Often, traditional training just scratches the surface of what the machine can do. With online training, more time can be devoted to learning the skills needed to get maximum production from the machine, which translates into the maximum ROI.
- The online training allows for continued growth. When new classes are added to the LMS, all users who would benefit from the lesson are notified.
- Online training balances the need for getting work done with the need for knowledge. Operator learn as they need the skills.

LMS ensures your team has 24/7 access to the latest tools and training now and in the future.

# Intuitive Software

## Intuitive Marking Software, No Programming Required

Our software powers all requisite marking functionality.

Flexibility is built into the program. You can create text objects, graphic shapes, and barcodes quickly and easily, or import a wide variety of file formats.

### Traceability

- From UID to 2D, your traceability needs are covered.

### Barcodes

- Quick and easy creation of barcodes, UID and other traceability forms.

### Dynamic Text

- Dynamically link to an external text file to create serial numbers or barcodes.
- Create serialized text or barcodes within our software by selecting starting value and serialization increment value.

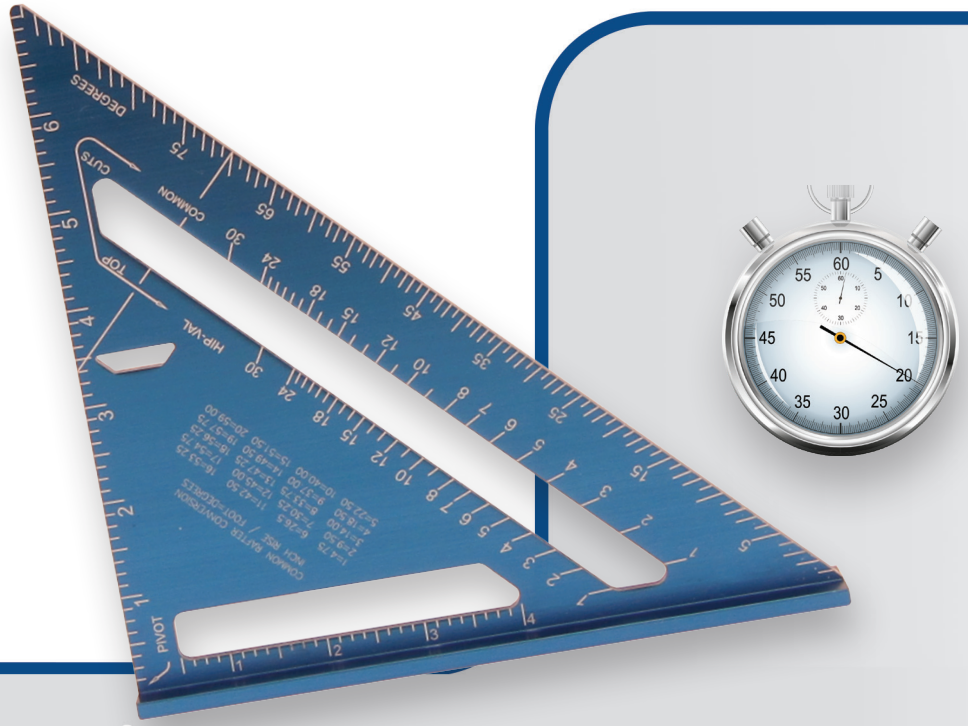
### Automation

- Enables marking automation such as Z-axis, rotaries, XY table and conveyor.
- The I/O Port sets a user port to HIGH, LOW or PULSE.
- Run Application starts and external executable files or an external batch file.

### Material Database

- Define and store multiple fixture

*Innovative CAD/CAM for the advanced and entry level operator.*






## Speed & Throughput

**1 File Creation**
Import or create the object

**2 File Preparation**
Size and position
Assign material settings

**3 Mark the Part**
Position part in laser
Set the focus
Run the file

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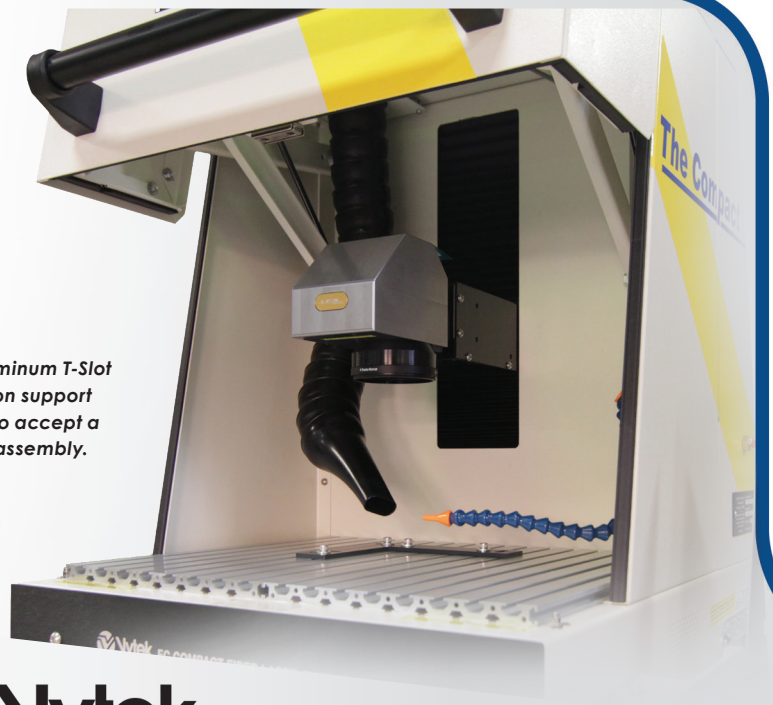
# Compact Desktop System

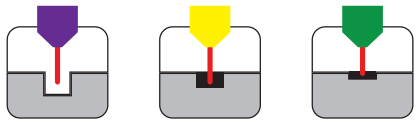
## Compact™

The Compact™ Series laser systems boast the smallest footprint for the largest work area of any desktop laser on the market while maintaining superior marking capabilities. The Compact is just as comfortable in a high production environment as it is in an R&D world.

From deep engraving to black marking on stainless steel, the Compact is the right tool for your laser marking requirements.


*All-aluminum T-Slot extrusion support ready to accept a fixture assembly.*



ENGRAVE MARK ABLATE

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# With the Features that Make Sense

## Standard Features

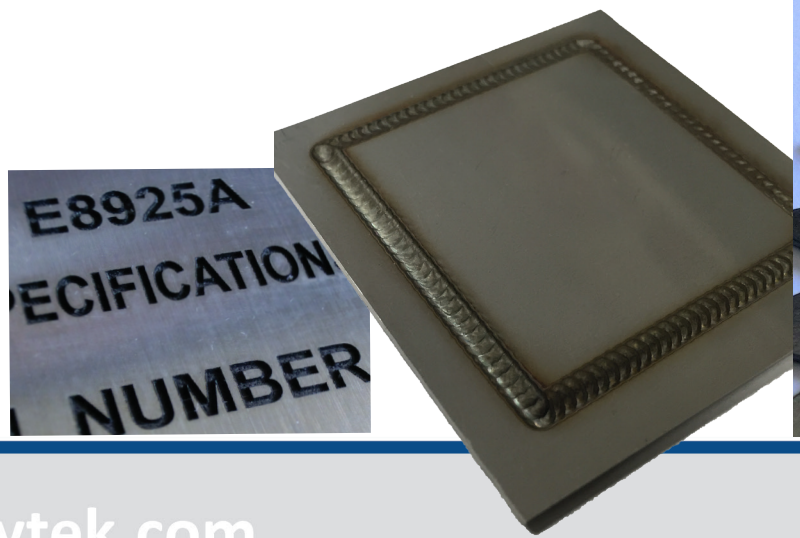
The standard features of the Compact go well beyond entry level. Some of the advantes are:

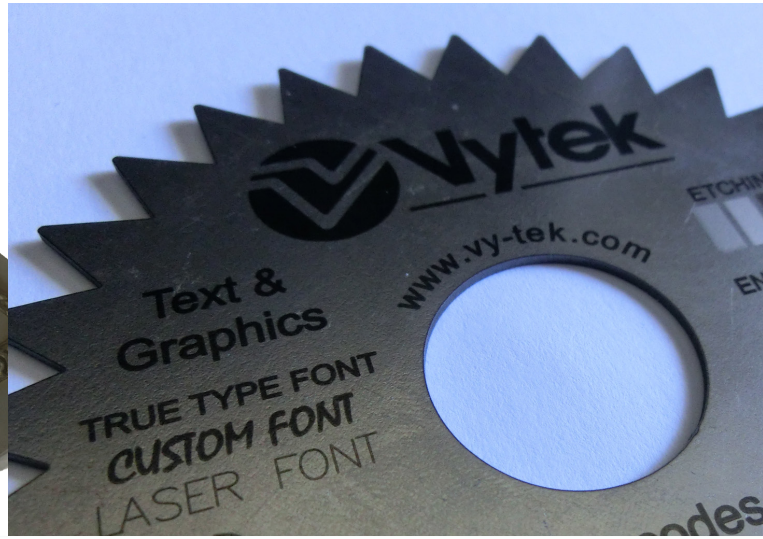
- Space saving design
- Work table size: 16" x 16"
- Easy to use software (no programming required)
- Automation ready
- 20 watt pulsed laser standard
- Programmable Z
- Ergonomically designed
- Online training available 24/7
- Large T-Slot Table
- Mark preview outline
- Air assist and evacuation ports
- Ethernet network connection
- Made in the USA

## Options

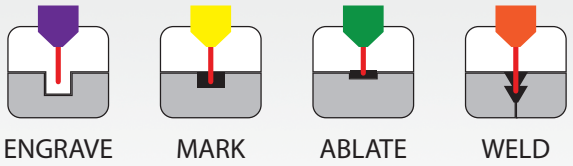
- 30 or 50 Watt lasers
- F-Theta optics F100, F160, F-254
- Magnetic fixture table
- Rotary chuck
- Rotary collet
- Pass-through door
- Bar code reader
- Dual diode focus
- HEPA filtration unit

*The space-saving, tabletop design can be set up and operational on day one.*



# Compact Elite Plus System



ENGRAVE MARK ABLATE WELD


## Compact Elite Plus™

The Compact Elite™ Plus, the big brother to the Compact offers twice the work area of the standard Compact. The Elite is designed to meet larger part marking needs while maintaining the smallest possible footprint.

With competitive systems offered at twice the price, the Elite is the ideal production system for the widest range of options.

The Elite is automation-ready, making it capable of taking on just about any application.

Proudly manufactured in the USA.


*The ideal system for the widest range of laser marking requirements.*

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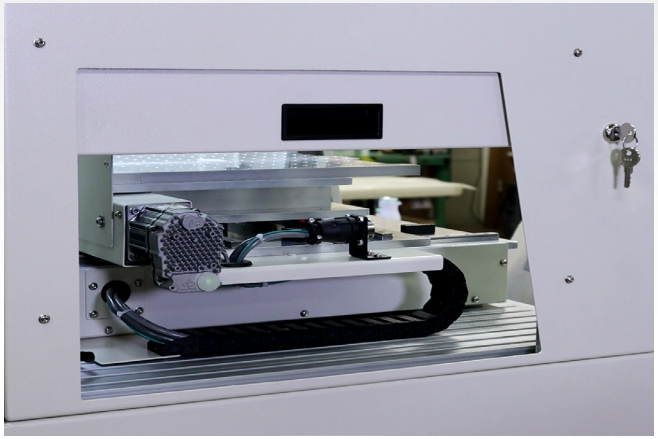
## Why The Compact Elite Plus™

A safe, flexible, and service-free system with impressive list of standard features and a host of affordable options.

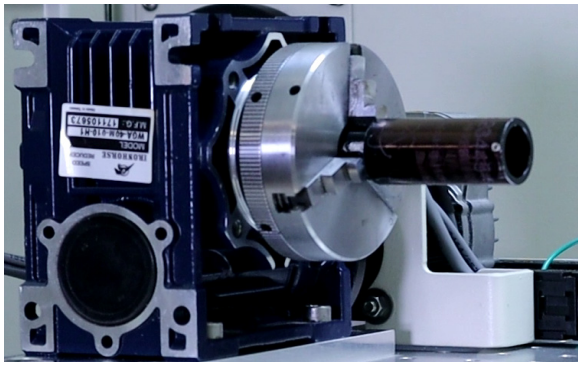
- Easy to use software (no programming required)
- Automation ready
- 20 watt pulsed laser standard with option upgrade to 30, 50, or 100 watts
- Quick change F-Theta Optics from F100-F420
- Automatic hydraulic door
- Programmable Z
- Ergonomically designed
- Online training available 24/7
- Large T-Slot Table
- Mark preview outline
- Air assist and evacuation ports
- Made in the USA



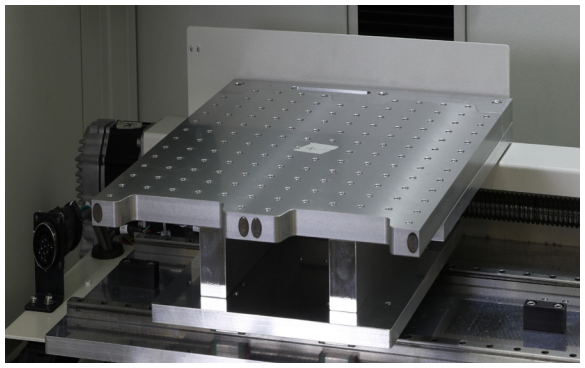
**Automatic Door**

The hydraulic door is a standard feature in the Elite Plus. It opens and closes automatically with the key.

**Air Assist**



**Rotary**



**XY Table**

# RoboMark™


***Can be configured to Mark, Weld, and/or Cut.***

## RoboMark™

The RoboMark™ laser processing system is an all-in-one robot integrated with a laser marking station for fully-automated production marking and welding. The RoboMark offers the flexibility to meet high volume or high-mix/low-volume processing for a wide range of part types. The RoboMark is equipped with the most respected robotics from FANUC to ensure the highest accuracies with one of the easiest interfaces. The RoboMark can be equipped with a range of part staging options including tray, elevator drawer, pallet, and infeed/outfeed conveyor as well as custom configurations.

*An all-in-one robotic laser marking solution that automates marking quickly and easily.*

FANUC

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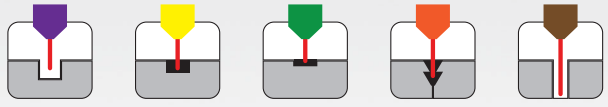
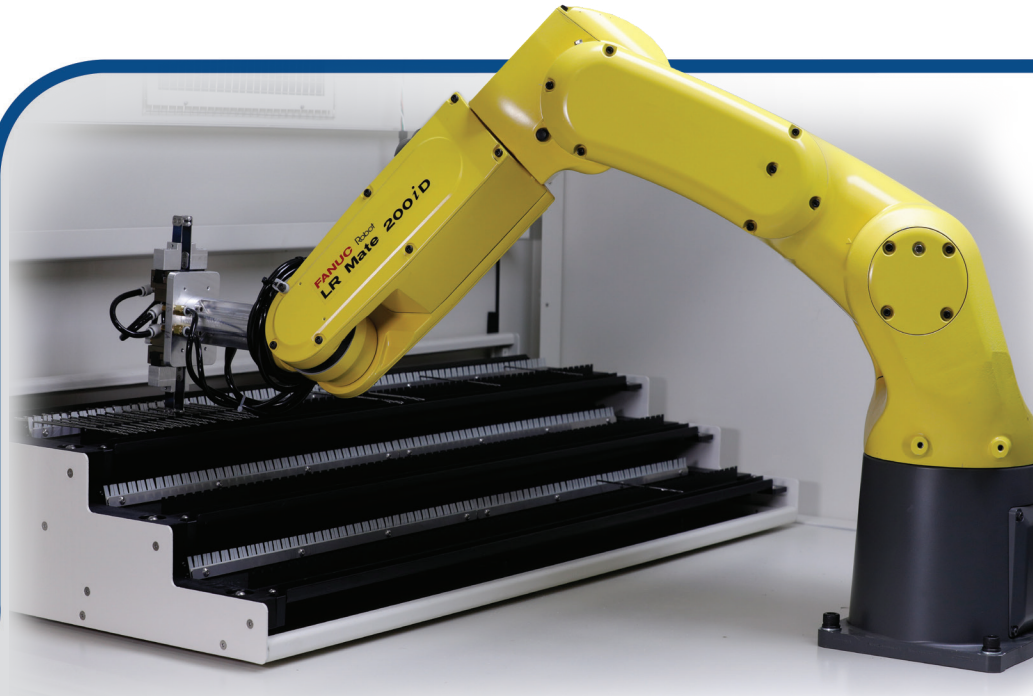
# Automation Workhorse




## Advantages

RoboMark is equipped with the most respected robotics solutions in the industry including FANUC, Yaskawa and others to ensure the highest accuracies with the easiest interfaces. RoboMark can be configured with a range of part staging options including multi-level tray our Stadium Seating option as well, drawer storage, infeed/outfeed conveyor systems, and custom configurations.

- Automation rotary stages
- XY axis for gang setups
- Vision-based inspection
- Welding and cutting head integration
- Custom configurations
- Welding configurations
- Staging options including tray, elevator drawer, pallet, and infeed/outfeed conveyor as well as custom configurations.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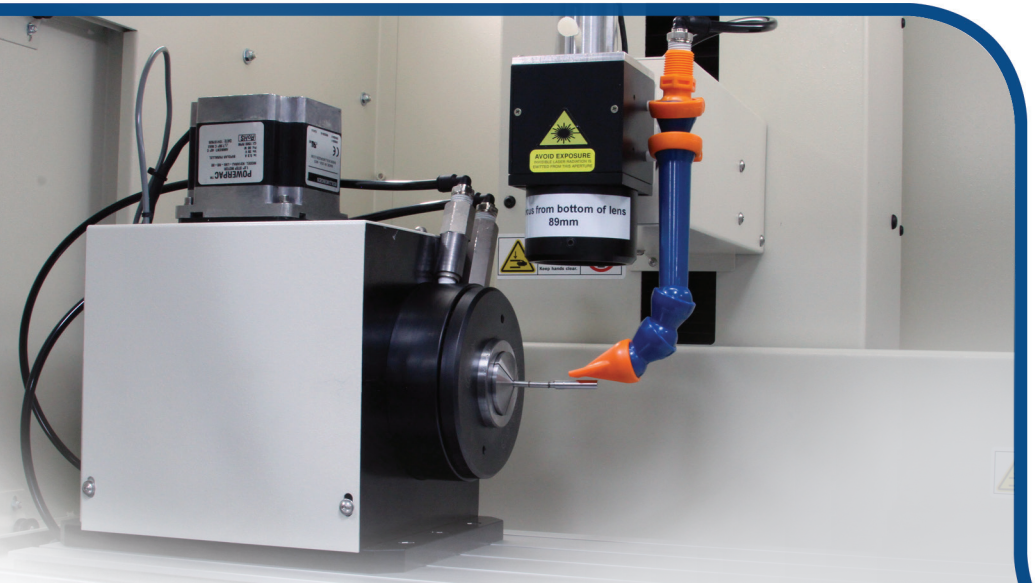
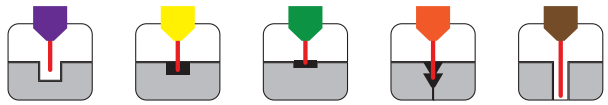
# Compact XYZ

The perfect system for high performance step-and-repeat batch processing or oversized part marking.


*Can be configured to Mark, Weld, and/or Cut.*



ENGRAVE MARK ABLATE WELD CUT

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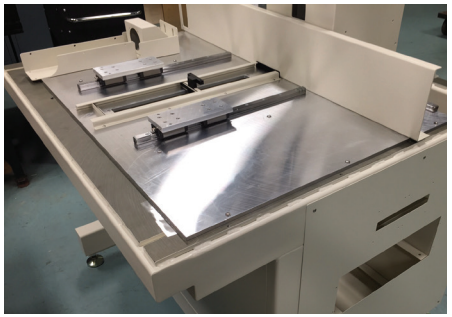
# High Performance System

## Compact XYZ™

The Compact XYZ™ combines the capabilities of a fixed head laser system with the benefits of a moving head assembly. The XYZ is ideal for batch processing and step-and-repeat marking while maintaining a small spot size to maximize throughput. The XYZ can also process oversized parts that require either marking (or deep engraving) over a large area or discreet marking in locations separated by a distance greater than the marking field. The XYZ provides the accuracy and the flexibility needed to handle tall or long parts. It can also be setup for welding, light cutting, vision options, automated loading and unloading, and even rotary options for round part marking.

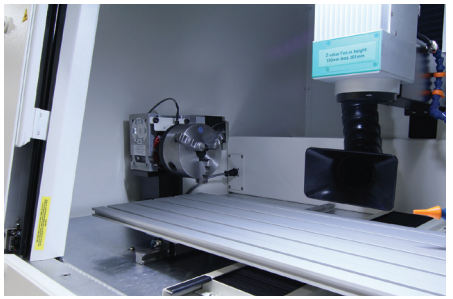


The Compact XYZ base system is a steel structure designed specifically to reduce the effects of the surrounding vibrations while offering a thermally stable support structure. The base is welded and stress relieved then precision ground for high accuracy.

## Features

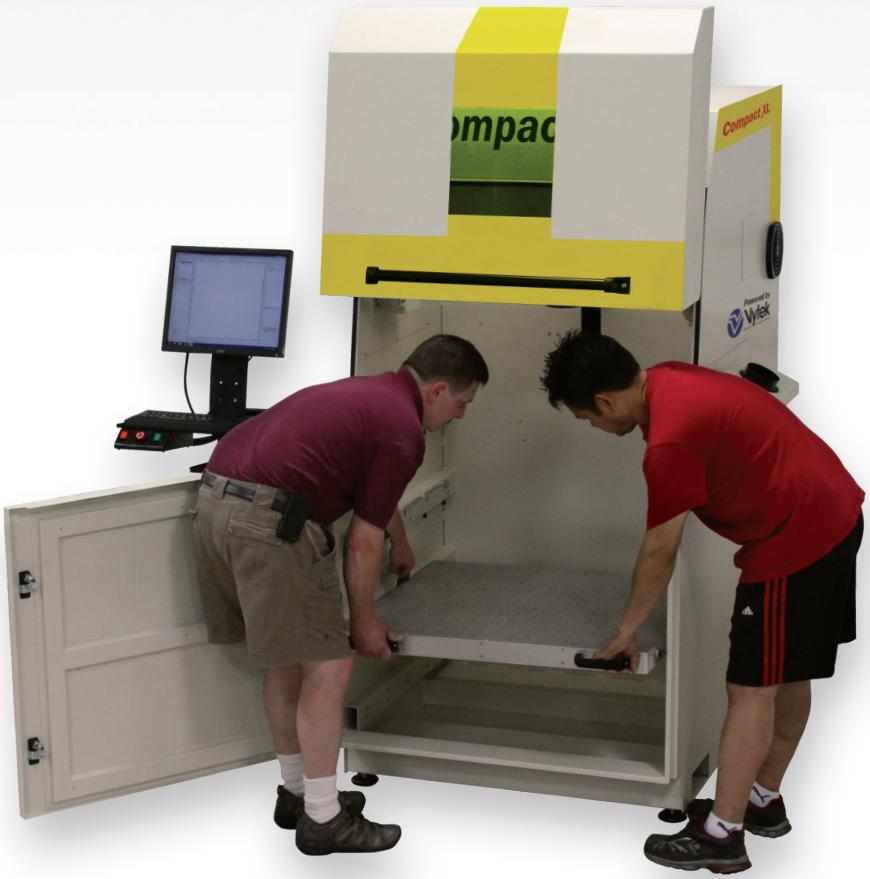
The Compact XYZ is the perfect high performance system for medium to high batch production requiring laser marking, welding or cutting.

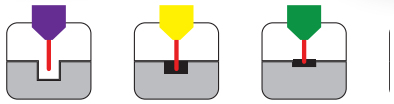
- 15" Z-Axis stroke, 12" Y-Axis stroke, 25" X-Axis stroke
- 20 watt pulsed laser standard with option upgrade to 30, 50, or 100 watts
- Ethernet Interface
- Class 1 Enclosure
- Quick Change Optic Assembly for Focal Lengths from F-160 to F-420 for Marking
- Automatic or Manual focus for cutting
- Capacitance height following for metal cutting applications
- Full Function Operator Interface for On-The Fly Program Adjustment with the integrated PC option



The Compact XYZ series also utilizes a programmable Z axis which makes it ideal for step and repeat applications as well as marking, cutting or welding heights at different levels on a single larger part.

# Compact XL






## COMPACT XL™

The Compact XL is a jumbo-size laser station capable of marking a part size up to 3' x 3'. The XL Series includes an adjustable table deck that allows oversized parts to be fully inserted into the cabinet while maintaining a Class 1 rating.

The XL is available in 2 or 3 Axis configurations.

### Rotary Index Table

The precision-machined rotary index table has two stations and can be set up for one continuous job or two different jobs. It helps eliminate wasted time spent on material handling and increases throughput. It is touch sensor-controlled for ease of operation.

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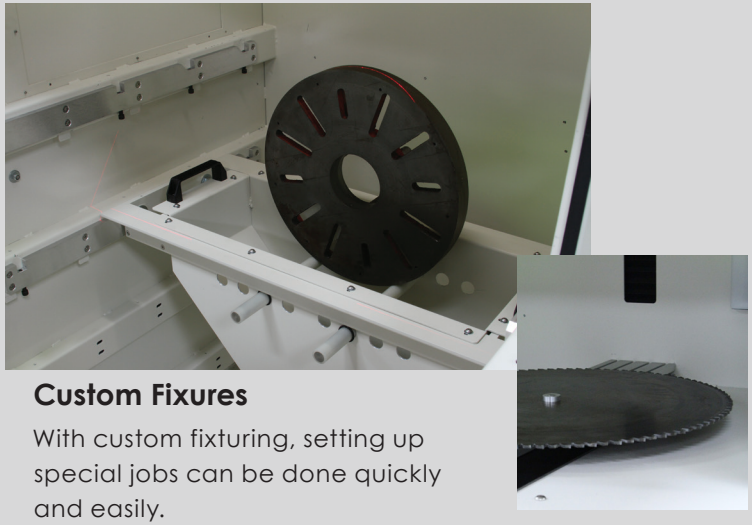
# Medium Batch Production System

## Overview of the Compact XL

The XL is an ideal platform for integration in both prototype and production environments that need an oversize work area. The following are available configurations.

- Pulsed 1070 20 watt YB fiber based laser source with options to 200 watts
- High performance 3 axis scan head with 30mm aperture
- Super-sized work cabinet
- Programmable motorized Z focus with 8" (381mm) of stroke
- Integrated rack mounted PC with adjustable arm for monitor and keyboard support
- Class I Enclosure
- Adjustable table
- Lighted interior cabinet
- Fume extraction port
- Fold away door access
- Bottom door access
- Red light diode pointer
- Made in USA



### Custom Fixures

With custom fixturing, setting up special jobs can be done quickly and easily.

## Options Available

- Welding configurations
- Conveyor options
- Rotary index tables to 48"
- XY tables
- C axis/Rotary 3 jaw chuck
- CCD camera viewing
- 2 and 3 axis galvo configurations
- Special laser configurations and spot sizes
- Green and UV laser options
- Pass-through options.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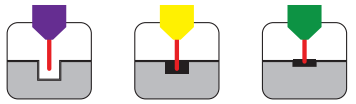
# Compact Tower


*A high throughput laser marking solution with a rotary index table for fast part processing.*

## Compact Tower™

The Compact Tower™ is a free-standing system that can be equipped with a Rotary indexer for circumferential marking or a rotary dial table for higher throughput of direct part marking.

The rotary index table maximizes laser operational time by allowing the operator to safely load and unload parts while the laser system is marking on another station of the index table. This table doubles the throughput of the system. With rotary index times of less than a second, the Tower is ideal for parts with short mark cycle and when handling time per part needs to be minimized.



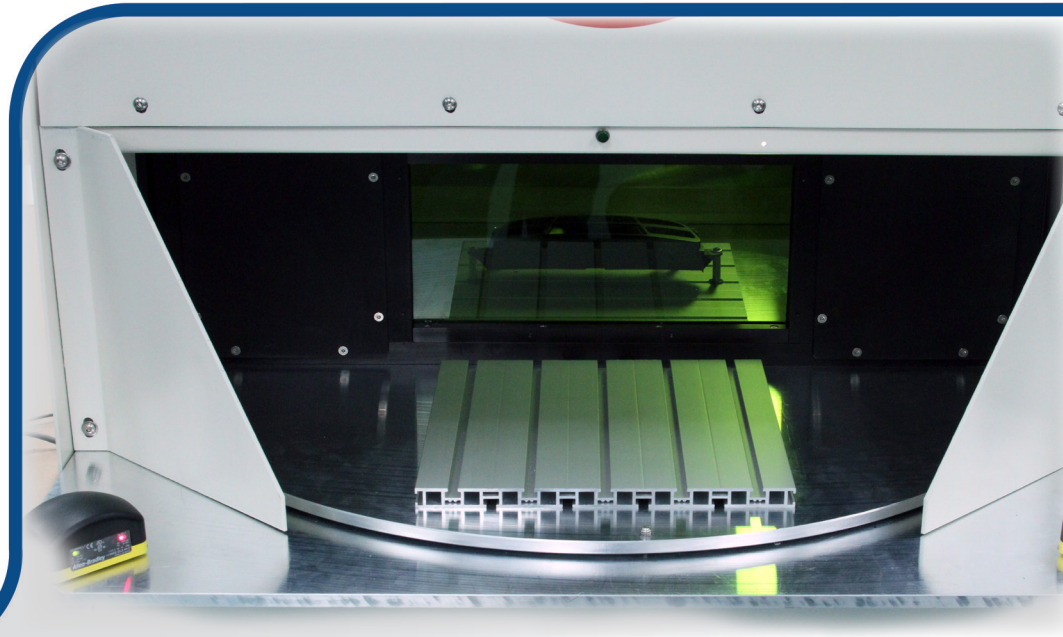
# High Speed  Rotary Table System

## Specialized Featurs and Options

The Tower system has an oversized enclosure and a host of available options and can be set up for just about any task. The standard system integrates a 10" Z-Axis, ethernet interface, 20 Watt pulsed YB fiber based laser, Class I enclosure and fully functional operator interface for "On-The-Fly" programming.

Add any of the following features to maximize throughput:

- Laser power options to 200 watts
- Top and Bottom door access
- Welding configurations
- Conveyor options
- Rotary index tables to 48"
- XY tables
- C axis/Rotary 3 jaw chuck
- CCD camera viewing
- 2 and 3 axis galvo configurations
- Special laser configurations and spot sizes
- Green and UV laser options
- Pass-through options.



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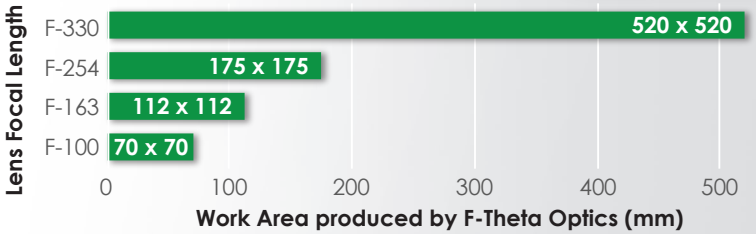
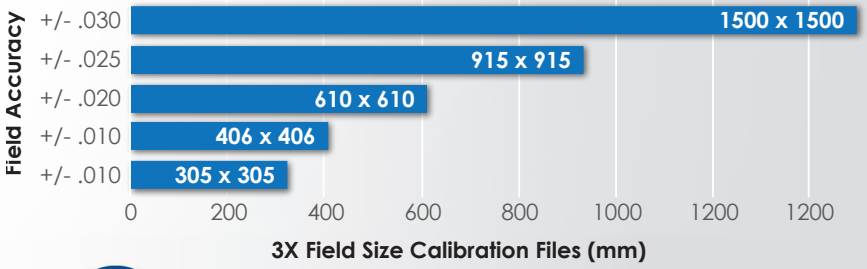
# OEM 2X and 3X


Highly accurate cutting capabilities combined with the industry's most energy efficient footprint.

## OEM 2X Optic Choices and Work Area

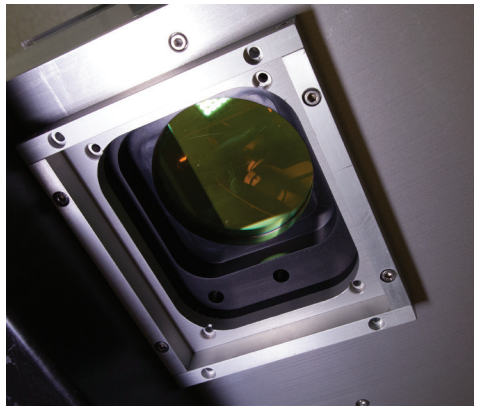



## OEM 3X Calibration Files & Field Accuracy




## OEM 2x and 3X

The CO2 OEM series are the most advanced and reliable industrial grade sealed CO2 laser marking and laser cutting systems available on the market today. With a host of configurations and options, the OEM series are ideal for integrating into an assembly line with or without a PC. Vytek has a range of choices and integrated laser designs for you to choose from. The OEM series includes laser control and power supplies and each model is in one housing for the scan head. The CO2 OEM series is available in power ranges



**Note:** Larger files and high accuracty available upon request.

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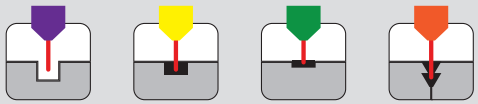


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# CO2Cab System


## CO2Cab 2x and 3X

The CO2Cab is a 2 or 3 axis Galvo based series. It is ideally suited for medium area engraving, cutting and marking.

With the CO2Cab series the laser beam is delivered to the work by means of a high accuracy galvo with a working field size defined by the user's choice of optics. The base system is a heavy contiguous steel structure designed specifically to reduce the effects of the surrounding vibrations while offering a thermally stable support structure.

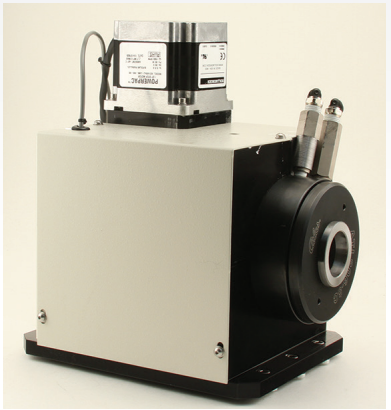
DESIGNED AND MADE IN THE USA!

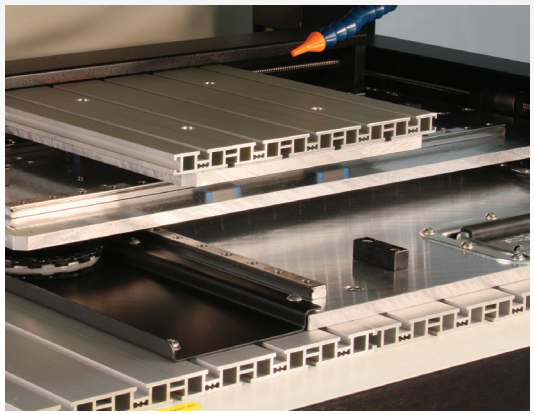

Versatile cutting & engraving galvo based systems.

# Options and Configurations

## The 5C Collet Rotary

Our 5C collet rotary option allows fast change over for both small and long parts, as well as parts requiring a through hole. It uses industry standard collets, and has up to 25-pound capacity. The unit can either be operated automatically through software control or with and optional foot pedal-actuator.





## XY Table

The XY table allows for multiple part marking with a highly accurate, programmable XY motion. It maintains Class 1 system status while increasing throughput.

## Vision Aided Marking & Cutting

The Compact Elite™ , the big brother to the Compact offers twice the work area of the standard Compact. The Elite is designed to meet larger part marking needs while maintaining the smallest possible footprint.

With competitive systems offered at twice the price, the Elite is the ideal production system for the widest range of options.

The Elite is automation-ready, making it capable of taking on just about any application.

Proudly manufactured in the USA.


## Feature and Option Availability by Machine Model

▲ Standard Feature ● Available Option

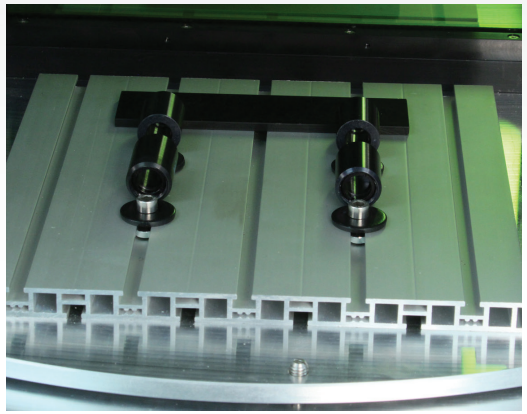
| | Wattages (20w standard) | | | | Optics (1 optic standard) | | | | | Tables | | | | Features | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 w | 30 w | 50 w | 100 w | F100 | F160 | F254 | F330 | F420 | T-Slot | Magnetic Fixture | XY Table | Rotary Dial | Programmable Z | Mark Preview | Air Assist | Air Evac Ports | Software | Computer | Online Training |
| Compact | ▲ | ● | ● | | ● | ● | ● | | | ▲ | ● | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Compact Elite | ▲ | ● | ● | ● | ● | ● | ● | ● | ● | ▲ | ● | ● | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Compact Tower | ▲ | ● | ● | ● | ● | ● | ● | ● | ● | ▲ | ● | ● | ● | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Compact XL | ▲ | ● | ● | ● | ● | ● | ● | ● | ● | ▲ | ● | | ● | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Compact XYZ | ▲ | ● | ● | ● | ● | ● | ● | ● | ● | ▲ | ● | ▲ | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| RoboMark | ▲ | ● | ● | ● | ● | ● | ● | | | ▲ | ● | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |

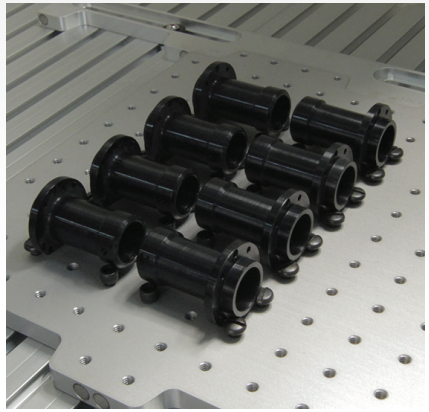
**Note:** Specifications for reference purposes only. Check with your sales rep for current specifications. Specifications subject to change without notice. Chart

# Built to Suit Your Needs

## Rotary Index Table

The precision-machined rotary index table has two stations and can be set up for one continuous job or two different jobs. It helps eliminate wasted time spent on material handling and increases throughput. It is touch sensor-controlled for ease of operation.





## Magnetic Fixture Table

Consider a magnetic fixture table when part swapping speed is critical. The magnetic fixture table is a combination of a docking rail and interlocking fixture plates that quickly secure and release with the use of magnets. Kit includes an assortment of fixtures.

## Feature and Option Availability by Machine Model

▲ Standard Feature ● Available Option

PDF: Accessories not covered in brochure

| | Rotary | | | Door | | Features, Options and Model Comparison | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rotary Chuck | Rotary Collet | Rotary Lg Chuck | Manual Door | Auto Door | Pass-Through | Barcode Reader | Robot | Conveyor | Dual Diode Focus | HEPA Filtration | Ethernet | Built in USA | Stand | Z-Axis Stroke | Maximum Part Height w/F-160 | Work Area |
| Compact | ● | ● | | ▲ | | ● | ● | | | ● | ● | ▲ | ▲ | ● | 10" | 6" | 16" x 16" |
| Compact Elite | ● | ● | ● | | ▲ | ● | ● | | ● | ● | ● | ▲ | ▲ | ● | 16" | 12" | 25" x 25" |
| Compact Tower | ● | ● | ● | | ▲ | ● | ● | | ● | ● | ● | ▲ | ▲ | | 16" | 12" | 25" x 25" |
| Compact XL | ● | ● | ● | | ▲ | ● | ● | | ● | ● | ● | ▲ | ▲ | | 16" | 36" | 36" x 36" |
| Compact XYZ | ● | ● | ● | | ▲ | ● | ● | | | ● | ● | ▲ | ▲ | | 12" | 12" | 18" x 40" |
| RoboMark | | | | | ▲ | ● | ● | ▲ | | | ● | ▲ | ▲ | | 16" | 12" | 25" x 25" |

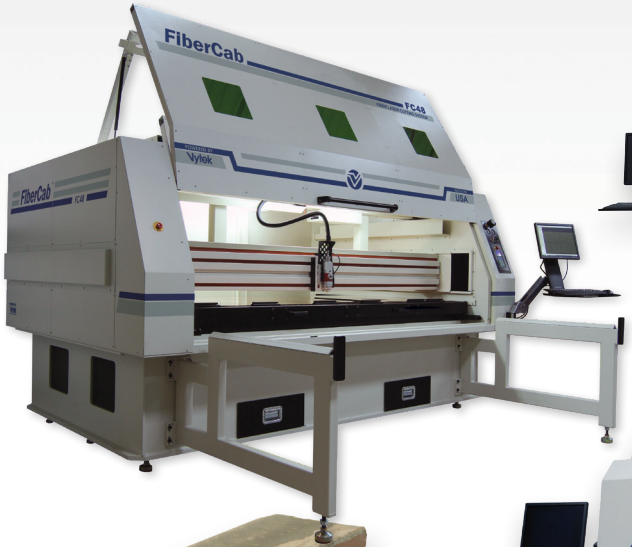
**Note:** Specifications for reference purposes only. Check with your sales rep for current specifications. Specifications subject to change without notice.

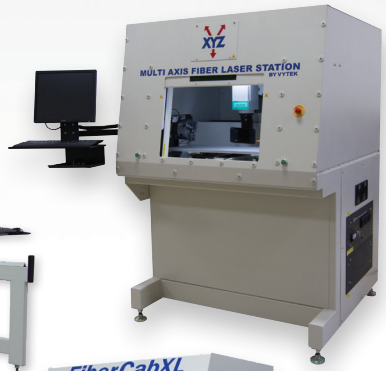

## Class 4 Pass-Though

When parts occasionally exceed the cabinet size, choose our Pass-through option available on The Compact.

# A Rich History of Providing Solutions

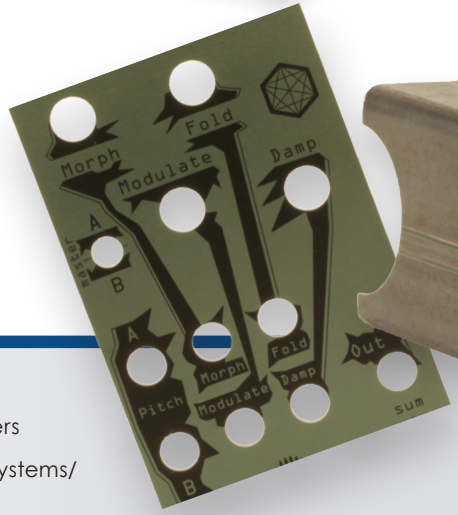
## CUTTING | ENGRAVING | MARKING | WELDING

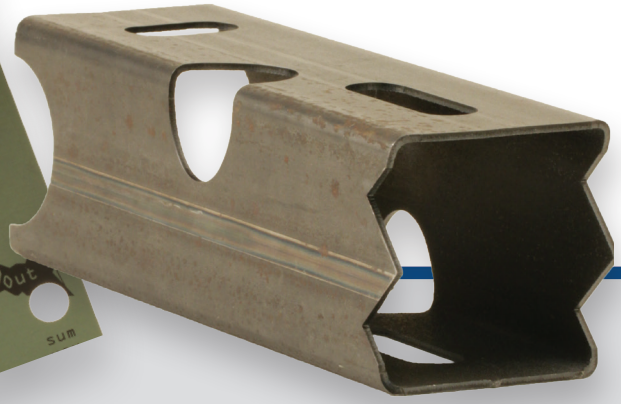








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