

Take advantage of Section 179

Section 179 will save your company a lot of money (the deduction is at a robust \$1,000,000, and will stay there for the entirety of 2019.)

<https://www.section179.org/>

Completely Refurbished:
BUILT 2012
Laser Marking System
Class I

LASIT CompactMark

XYZ Work Station
Configured with 20 Watt
FiberFly Laser





Composition of System

- **FiberFly** Laser with **FFL 163**.
- Class I Structure with motorized and PC-controlled Z and X axes, Y table.
- Pneumatic door with wide inspection glass
- Removable side panels
- PC with **FlyControl** and **FlyCad** software
- Installation and training



Description of Actual Machine

The **CompactMark**, equipped with the **FiberFly** laser, is a high performance marking system with a winning combination of features offering flexibility and complicity in the movement of the components with up to 5 axes including the Z and X axes, a Y table, rotary indexer, and moving and rotating scan head. User friendly **FlyCAD** software provides drawing capability.

With a **footprint of only 800(L)x1200(D) mm** the system provides a working area of **580x500mm**.

With the **Z axis** stroke it is possible to mark components of varying thicknesses from 0 and 400mm (as thin as a sheet of paper, or as thick as a dictionary).

CompactMark was designed to be used from either a sitting or standing position.

The console is ergonomically friendly and easy to use, and comes with an industrial

keyboard; a 17" LCD monitor (optional 19") and a joystick.

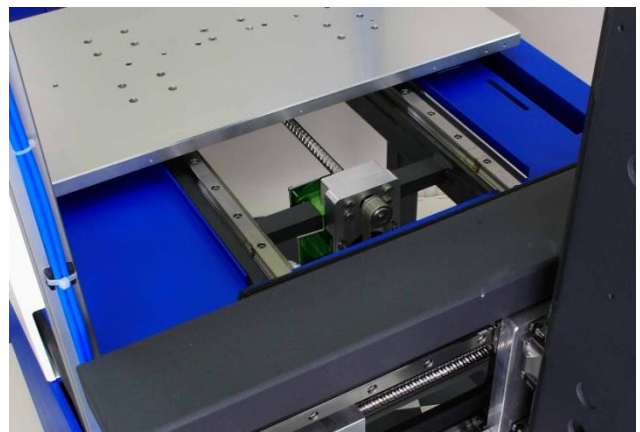
The motors can easily be controlled using the **joystick**, which becomes an indispensable instrument when used together with the **Smart Focus System**. Positioning and marking of the many varied parts, in terms of shapes and dimensions, is simple by using both instruments.

The door closure controls (the **CompactMark** is a class I structure) provide minimal stress. An optional light curtain eliminates the need for mechanical interaction.

When cylindrical parts are to be marked – rings and spindles, for example – the **Rotary Axis** is ideal for continuous, automated marking. The rotating axis is an option that can be installed by the customer and removed when not in use.

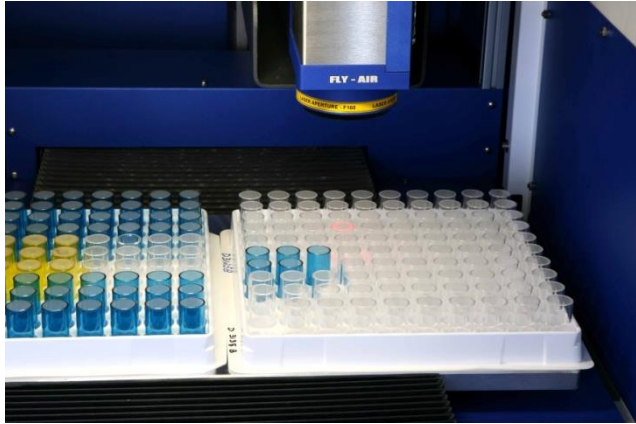
Rigidity and precision

The CompactMark is extremely rigid: the structure is made entirely of expanded and precision machined steel. After thermal expansion process, the locating faces are milled out for the screws and sliding guides. The guides and high precision screws, along with the motors with encoder (2048 steps per revolution) ensure excellent performance, when positioning requires tight tolerances and a high level of precision, reliability and repeatability.



Series marking on pallets





The working area of **580x500mm** may be used both for marking a single component, a pallet, or multiple pallets with shuttles or xy movement optimizing production through-put and cycle time.

Marking times are often considerably less than the time required for loading and unloading the pieces to be marked. In order to increase productivity, it is possible to mark, automatically, series of parts, arranged on pallets occupying the entire marking plane surface. The FlyCad

program means that the number of items to be processed can be inserted, along with their distance in X and Y, and the program automatically controls the movement of the axes and the marking process. Any combination of fixed texts and variable fields, such as serial numbers, dates, bar codes, 2 D matrix can be marked. The CompactMark offers greater productivity because unlike systems with an X-Y table, it offers a hybrid steel structure and closed cycle motor with encoders that allow greater acceleration and speed without vibration.

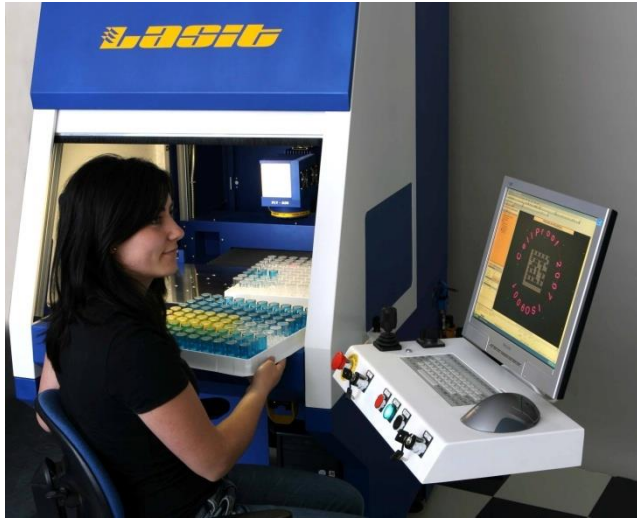
Marking of very tall and/or complex parts

The motorized **Z axis** allows materials of varying thicknesses from 0 and 400mm to be marked. In addition to the X-Y-Z and W axes, a fifth axis, this provides programmed rotation of the scanner head & allows for marking of very complex parts without having to reposition the part. Marking is thus possible in areas that are difficult to access, such as steeply sloping walls, conical surfaces and the outside and/or inside of cylinders, with no need to tilt the parts and, therefore, with no need to set up positioning equipment.

Extremely easy to maintain

The CompactMark is completely modular: laser, motors, scanner and PC are easy to access and are easily interconnected with a few cables and non-interchangeable connectors. Any fault can be quickly repaired without having to resort to specialist technicians.

Safety and convenience



The CompactMark is a safe and ergonomic Class One system which conforms to the European safety standards (IEC 8000 and CDRH/FDA – USA). It was designed for long use capable of operating 24/7 in harsh factory environments.

The pneumatic door is operated by placing two fingers simultaneously on two optic switches until the door is completely closed. If the operator removes one finger, even for an instant, the door automatically re-opens to avoid collisions. Use of the optic “support” system rather than the traditional pushbuttons is required by the new safety regulations.

This new design improves productivity and ease of use, and is less tedious for operator use. A large inspection window of 300x200mm means that the interior of the marking cabin can be seen clearly.

FiberFly

- **Extremely compact and innovative Laser Marking System.**
- **Stainless Steel Construction.**
- **Air-Cooled.**
- **Client/Server Architecture:** easy to integrate into almost any production lines.
- Superior **beam quality** and **high speed marking**.
- **Quality, precision** and **reliability** in all applications application regardless of the material.
- Only **one stainless steel connection cable**.
- Standard wall plug operation and high electrical efficiency.
- Exceptionally high reliability & maintenance free operation, do not need routine replacement on standard parts and materials.

Architecture

- Ultra-compact **Laser Module**.
- **Control Unit** in a 19" 3U Rack
- **Smart Link** a single stainless steel cable links the modular laser to the Control Unit.



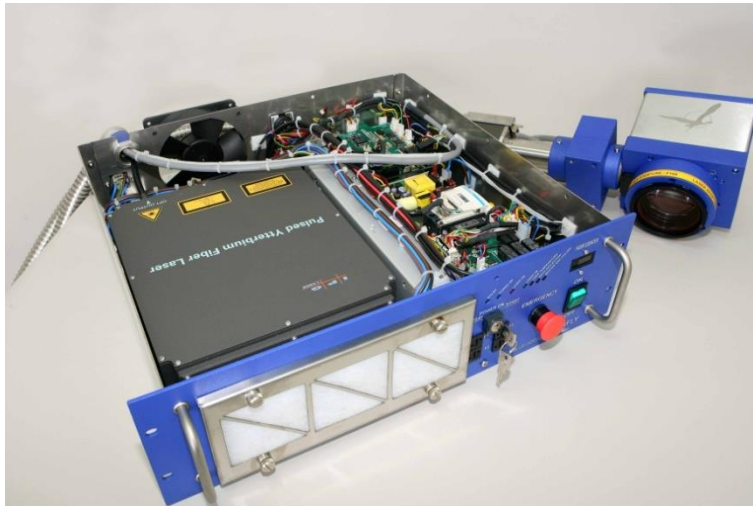
Laser Module

The laser unit groups, in a single sealed assembly; the galvo mirrors, the focusing optic, and the electronic control.

The **Scanning Unit**: depending the specific application and required speed, scan head can be supplied with 8 mm or 15 mm mirrors. A special assembly system allows for easy interchange without any optical realignment. The scanning unit is simple to rotate from -90° 0 $+90^{\circ}$ for marking different angles on a multitude of parts.

The unit is equipped with the **Smart Focus System**. It's an unique system that allows a quick and accurate positioning of the Z axis. This method is much more convenient and accurate than traditional previous systems based on the convergence of two laser pointers.

Control Unit



The **Control Module**, in a stainless steel 3U rack, contains the **Laser Generator**, the **Power Supply** and the **Server**. The Power Supply is protected against interferences and impulsive signals. The Server unit for the control of the laser marking system can be connected to the company network through a 100Mbit/s TPC/IP communication.

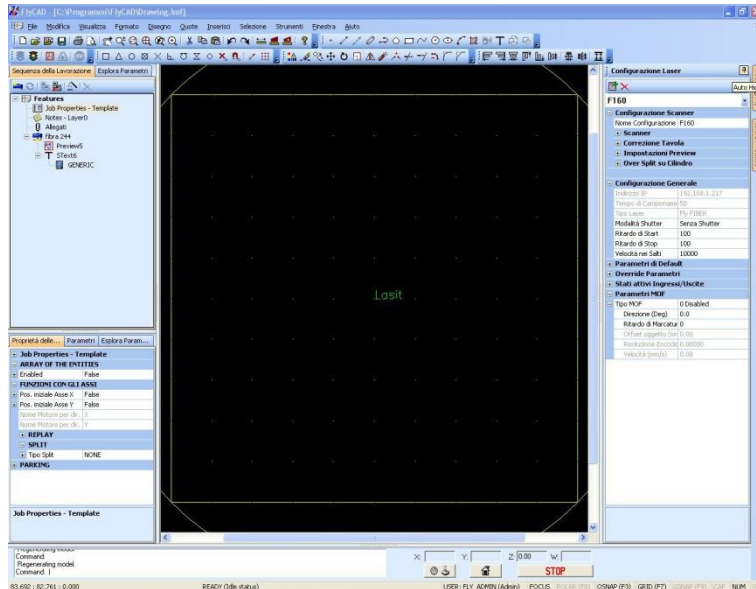
Smart Link



A single stainless steel cable links the modular laser to the Control Module. It provides for increased protection of the fiber and the cables. This design also eliminates the risk of accidental breakage of damage by a steel jacket.

Software

FlyCAD®



FiberFLY is equipped with **FlyCAD®** that operates through Windows® to create a marking system resulting in “what you see is what you get.”

The simplicity and flexibility allows the system to incorporate one (.dwg) or (.dxf) file with all the necessary information for marking every combination of True Type Text, Serial Numbers, Bar Codes, Data Matrix with the parameters and axis handling.

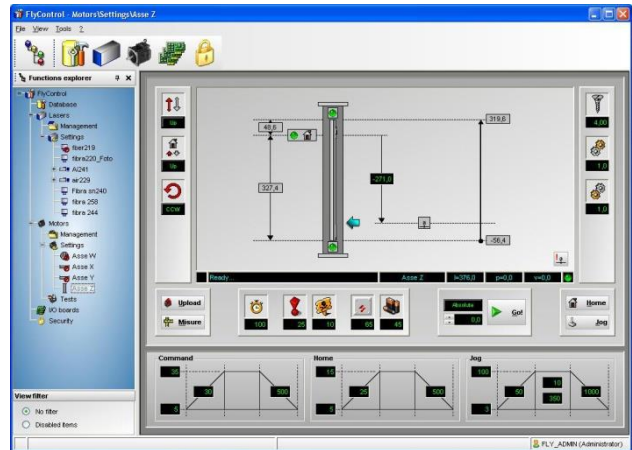
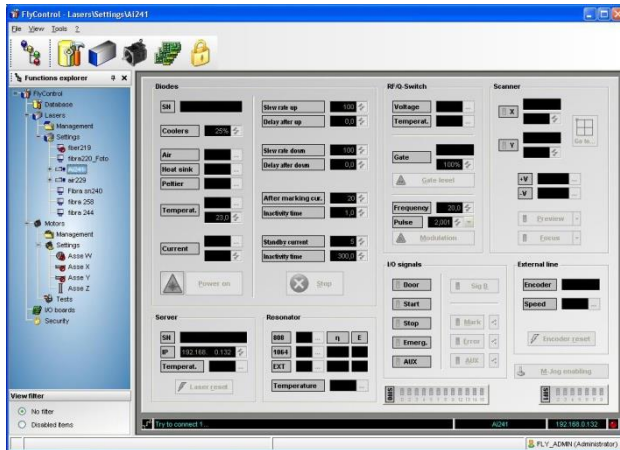
FlyCAD® Operative code

Precision	Lines, poly-lines, arcs and circumferences are created like geometric figures, rather than a collection of small segments.
Font	TTF fonts are fully supported in oriental languages too.
Text	Scalable fonts result in the same quality for small as well as for large text. Horizontal and vertical writing mode. Dimensions and orientation graphically programmable or through a dialogue box. Right, Left, Center Text Alignment. Circular text marking. The text to be marked is fitted on an arc. The starting angle, arc, radius and marking length are specified by the user.
Bar Code	Code128, EAN8 and EAN13, code 39, code 2 of 5. Other code available upon request.
DataMatrix	Fully compatible with AIM specifications.



Date Coding	The date coding includes prefix, postfix. It allows every combination of fields. Available fields are days, months, and years, week of the year, day of the year, hours, minutes, and seconds. It is possible to associate special symbols to day, month etc
Serial number	The serial numbers can include prefix, postfix, fixed number of digits (i.e. 001, 002 etc), arbitrary counting base from 2 up to 62, public or private counter. It is possible to use as many serial numbers as required for every drawing.
Direct Text Marking	This special field allows specifying the text to mark directly in a message box run time. It is possible to specify as many direct text fields as required. A typical use of this function is to mark a fixed part (i.e. logo) and one or more variable parts (i.e. P/N and Customer code etc.) that could change marking by marking or lot by lot.
Axes Integration	Grid Marking This function requires the use of X-Y positioning tables. It is useful when marking several little parts. They can be arranged on a big tray (according to the X-Y stage travel) therefore reducing the loading/unloading time. The software provides marking of all the parts inside the scanner marking area and then commands the X-Y stage to move the pallet to the next position. Split This function requires the use of X-Y positioning tables. The purpose of this option is to mark drawings larger than the scanner-marking field. FlyCAD automatically slices the drawing and moves the X-Y tables accordingly in order to engrave the whole picture.
Parameters	The entire Laser process parameters including Power, Speed, QSW Frequency, Number of Repetition, Delay Parameters, FPK, Wobble, etc. are stored in a file. It is possible to specify up to 63 different parameters set in each drawing. The file name can be 31 characters long.
Piece Counter	This function allows programming the number of pieces to be marked or counting how many pieces are marked.
Help	Context sensitive help. If the user press F1 or the HELP button a window appears with the explanation of the command function and the relative use

FlyControl®



FlyControl is the monitoring software of the laser marking system sub-assemblies and allows the user to have real time control of all the parts of the system.

It enables the user to monitor the functionality of **FiberFLY** and also to modify important parameters.

Moreover all the external events of the laser requested by the operator or by the production line and relating to the motors (if installed) are recorded and saved.



Technical Data

Laser Model	FiberFly
Technology	Ytterbium fiber laser
Wavelength	@ 1064 nm
Power in Continuous Wave (CW)	20 W
Cooling	air cooled
Aiming Beam	With diode laser generated red beam. The software allows to define an arbitrary pattern (lines, arc, polylines) according to the user's need to help position the parts to be marked.
Marking Area	580 x 500 mm
Z axis stroke	500 mm
Max Marking Height	450 mm – with lens FFL 100
Electric Connection	110 Vac (L+N+Gnd) 60Hz - industrial male connector
Maximum Absorption	1000 W
Pneumatic Connection	Compressed Air 4-8 bar – External diameter pipe ø8 mm
Operating Temperature	15°C – 35°C (60°F – 95°F) without condensation

Computer & software

Computer Configuration	PC HP PentiumD with Windows XP.
Software	FlyCAD and FlyControl

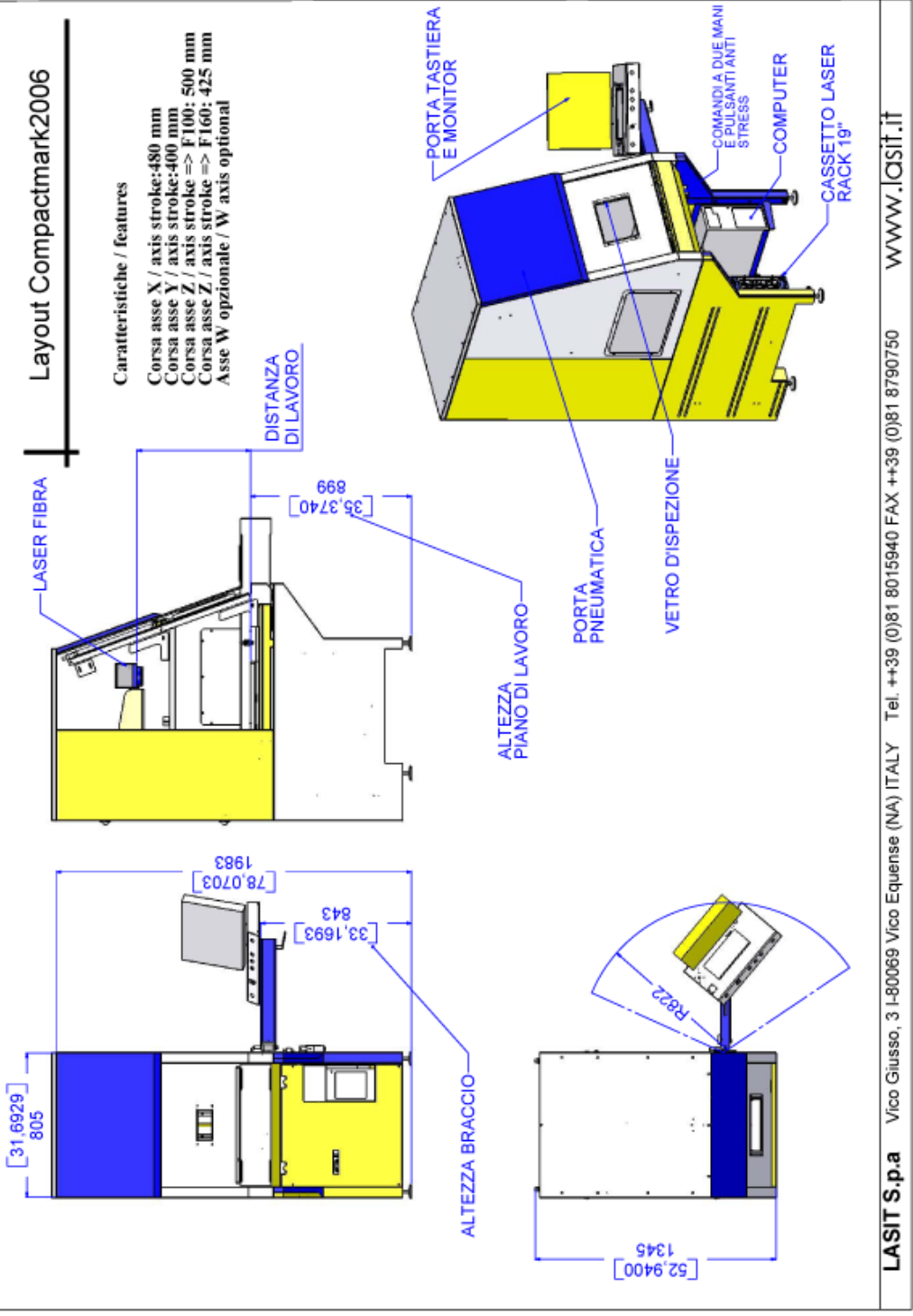
Focussing Lens

Focal	FFL 100 - FFL 160 - FFL 163 - FFL 254 - FFL 330 - FFL420
Protection Window	Filtration glass to protect the flat field lens from reflections or from the fumes due to the marking process (in the optional enclosure)

Layout Compactmark2006

Caratteristiche / features

- Corsa asse X / axis stroke: 480 mm
- Corsa asse Y / axis stroke: 400 mm
- Corsa asse Z / axis stroke => F100: 500 mm
- Corsa asse Z / axis stroke => F160: 425 mm
- Asse W opzionale / W axis optional



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ISO 9001:2000

- **Complete Class I Laser Marking System model CompactMark equipped with 20 watt Fiberfly Laser for metals and limited plastic marking, Scan head**
- **Welded steel structure**
- **Hybrid Split Gantry XY and Z**
- **Q Switched IPG Fiber laser with fixed pulse**
- **Additional Rotary indexer for marking cylindrical parts**
- **PC Windows 7 based with 17inch LCD monitor with Fly Cad Software described above.**
- **163 mm Lens, Programmable controlled X,Y, Z Axis**
- **Pneumatic Front loading door with protective viewing window**
- **Fiber Fly 20 Watt laser FFL163 mm**
- **Marking Chamber with pneumatic Door**
- **Z Axis 500 mm stroke**
- **Fly Control and Fly Cad in Windows Environment- XP, Vista or Windows 7**
- **Repeatability better than +/- 10 microns, accuracy +/- 30 microns**
- **Standard size**
- **Joy stick- manually move XYZ for fast repositioning**
- **Table Dimensions 690 x 400 mm**
- **Marking area 580 x 400 mm**
- **Additional software licences to work remotely-\$500 if needed for engineering to work remotely on programming**
- **Live webex support on software after installation- no charge**
- **New integrated keyboard with mouse**

- **Rotary Indexer with reversible chuck key**
- **Refurbished with new laser protective window**
- **Fully calibrated , ready to plug and play**
- **Free software upgrades- downloadable from internet- some limitations. Can upgrade to windows 10 with new computer**
- **Local US service and support – Laser Americas, LLC Franklin MA and Sarasota, FL**
- **Web Based Video Program with complete software instruction- \$1995 – FREE INCLUDED WITH MACHINE**
- **Accompanying Written manual with software instruction and maintenance and operation.- FREE INCLUDED**
- **Side panel has scratch in powder coating.**

Complete Class I Laser Marking System model CompactMark equipped with 20 watt Fiberfly Laser, 163 mm Lens, Programmable controlled X,Y, Z Axis, rotary indexer included

New Equipment

FOB Factory 2012 was: \$117,000

Asking Price: \$ 49,500 includes 20 watt fiber Class one enclosed laser, Pneumatic door, computer, Software, cabinet, XY, programmable Z, Rotary indexer for cylindrical parts, new US - integrated Key board and Mouse , New bellows on split gantry table, New Protective Window, and Web based Video training software



instruction learning management and accompanying 2019 software manual system- value \$1995 – included FREE with machine.

Sales conditions

Payment: 100% prior to shipping
Offer Validity: 30 days
Shipping: **FOB Franklin MA**
Delivery available for delivery before year end – take advantage of Section 179
Packaging: crating and shipping available or can pick up
Installation & training: **\$1500 per day** Installation and training in your plant included for 2 days. Customer should cover the direct cost of the travel, meals & accommodation.

