

HARAN AUTOMATION

OEM MACHINE DESIGN, BUILD & SERVICE



We provide cost effective automation solutions for the manufacturing industry.

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Some of the services we provide

1. Automation solutions for manufacturing
2. OEM Machine builder from concept to completion.
3. One stop for complete system from mechanical, electrical, controls, machining and fabrication.
4. More than twenty years of machine building experience.
5. Experience in the following
 - a. Design and build special purpose high-speed CNC machines for metal machining and 3 axis welding system.
 - b. Retrofit CNC machines with new controls
 - c. Design and build high speed packaging machines
 - d. Precision laser welding and cutting system for medical surgical device manufacture.
 - e. Precision laser cutting system for the electronic surface mount stencil cutting industry.
 - f. Repairs and control upgrades for old machines
 - g. Servo Motion control systems integration
 - h. VFD and vector drive and motor systems installation
 - i. CNC machining and fabrication of jigs and fixtures.
 - j. PLC controls integration. (AB SLC 500, Mitsubishi, Panasonic, PLC direct.
 - k. Special purpose machine design and fabrication.
 1. Video magnifiers for the electronic and medical industries.
6. Cost effective automation solution

- 7. Locally produced and serviced hence minimize down time and reduce costly travel.
- 8. Very reliable systems and reference available from all the customers
- 9. Machines built with CSA approved components and in accordance with local electrical codes.
- 10. Electrical as built drawings and control programs are provided with machines.

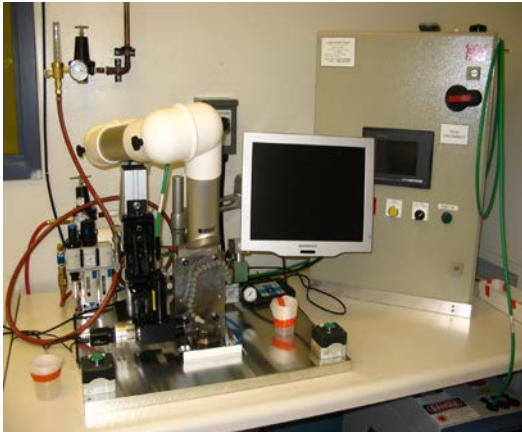
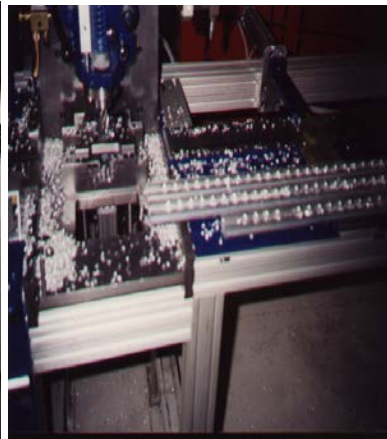
Designed & Built by us



CNC Laser Stencil Cutting System



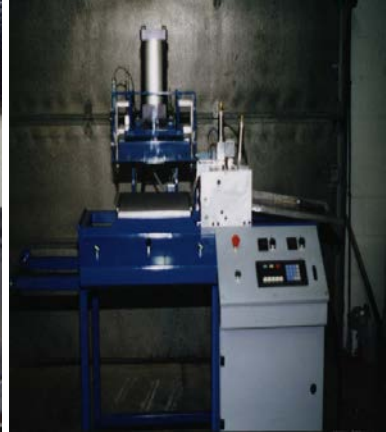
Control Station for CNC Track Milling System



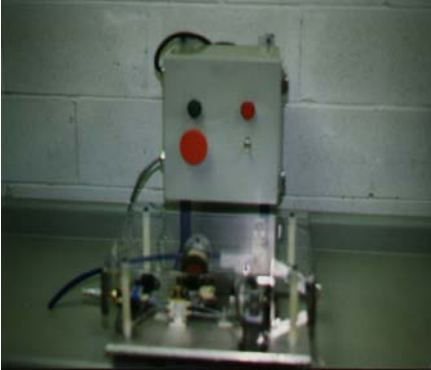
Laser Welding Automation



Power Panel for Parts Elevator



Cut To Length Machine



Cut To Length Machine



Welding CNC System 3 Axes



CNC Retrofit



CNC Control Retrofit

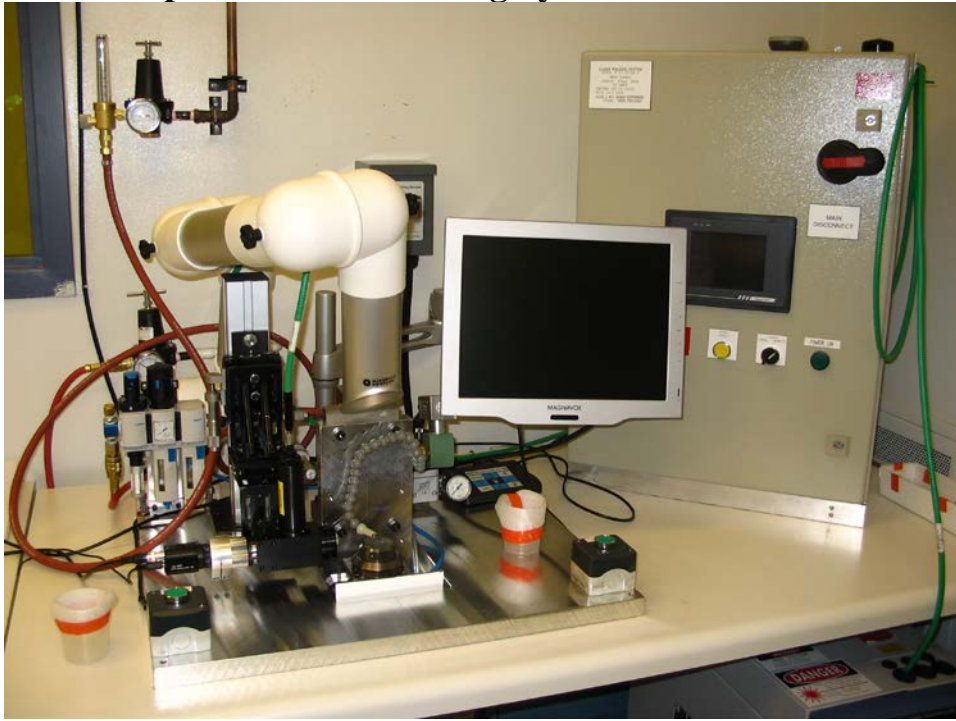


Rotary Table AC Servo Drive

Horizontal Spindle Laser Welding System



Vertical Spindle Laser Welding System

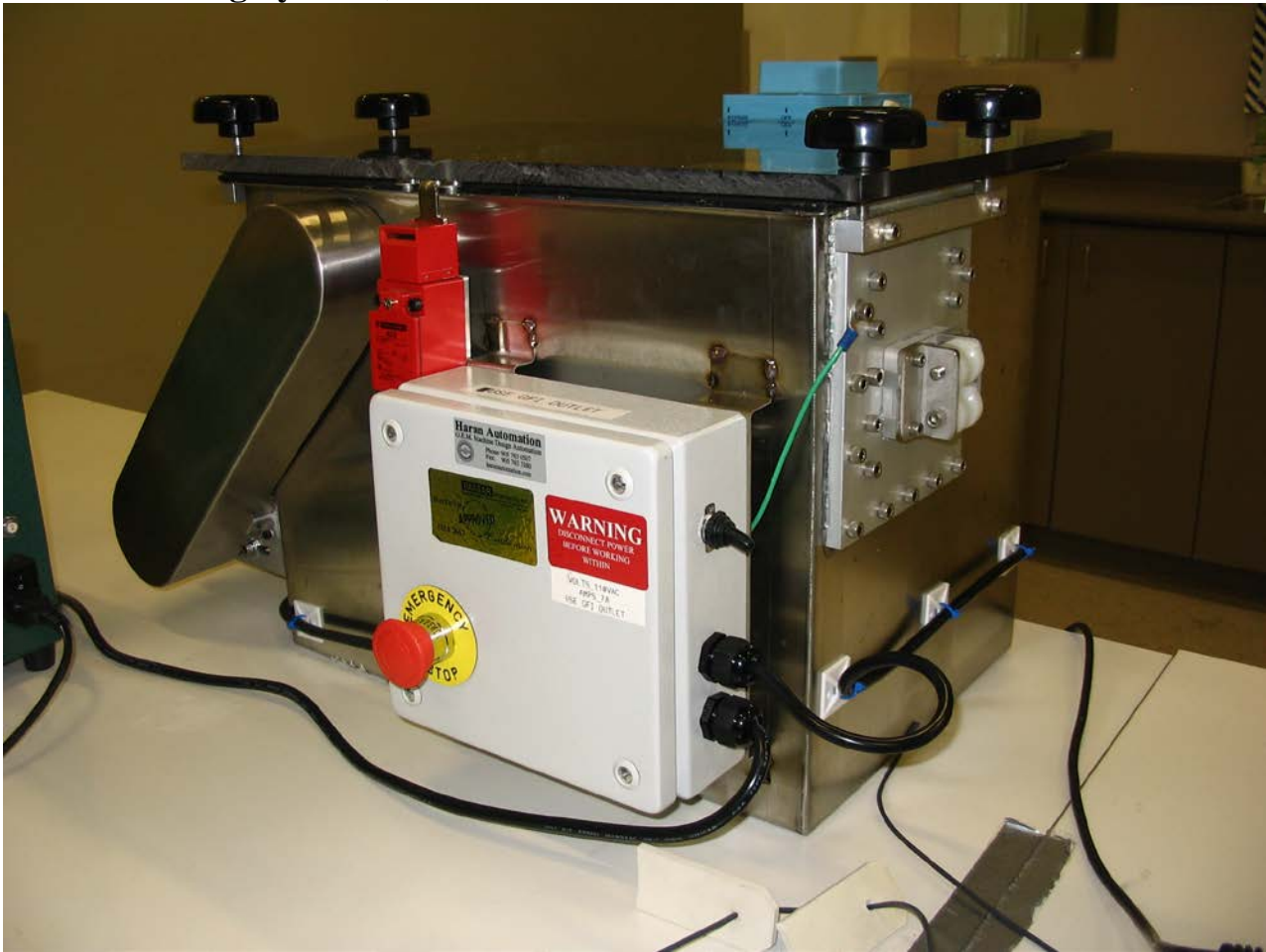


Laser Welding Systems

We built 2 vertical and a horizontal spindle laser welding machines.

The machines were designed for a medical surgical device manufacturer. The machines are used in the manufacture of pain management devices and cardiology surgical devices. With these machines the company was able to bring all the manufacturing in house and had a rapid growth.

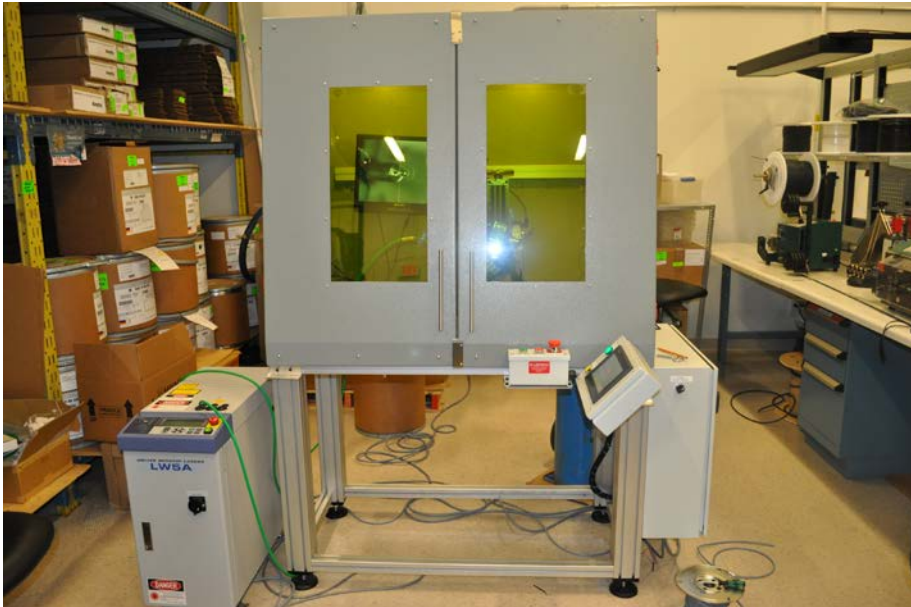
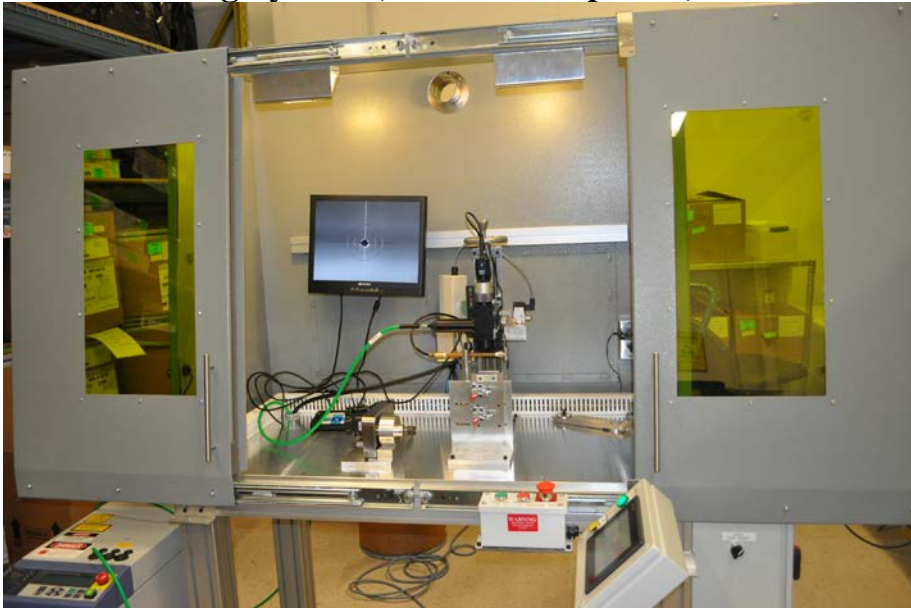
Cable Cleaning System (For the medical device manufacturer)



This machine cleans the talk from the electrical cables that are used for medical surgical devices. This was produced for the company in Mississauga and is one of a kind. The entire machine was designed and built in house. The machine consists of the following features.

- Stainless steel tank
- 6 scrubbing brushes driven by a motor
- Water pump, filter and spray nozzles
- Alcohol scrubbing chamber
- Electrical control system including safety interlocks

Laser Welding System (Horizontal Spindle)



Designed for welding thermocouple and sleeves on medical needles.
Enclosure with sliding doors, safety interlocks monitored by safety relay and viewing windows are rated for YAG laser. Fully digital spindle speed control system with AC drives.

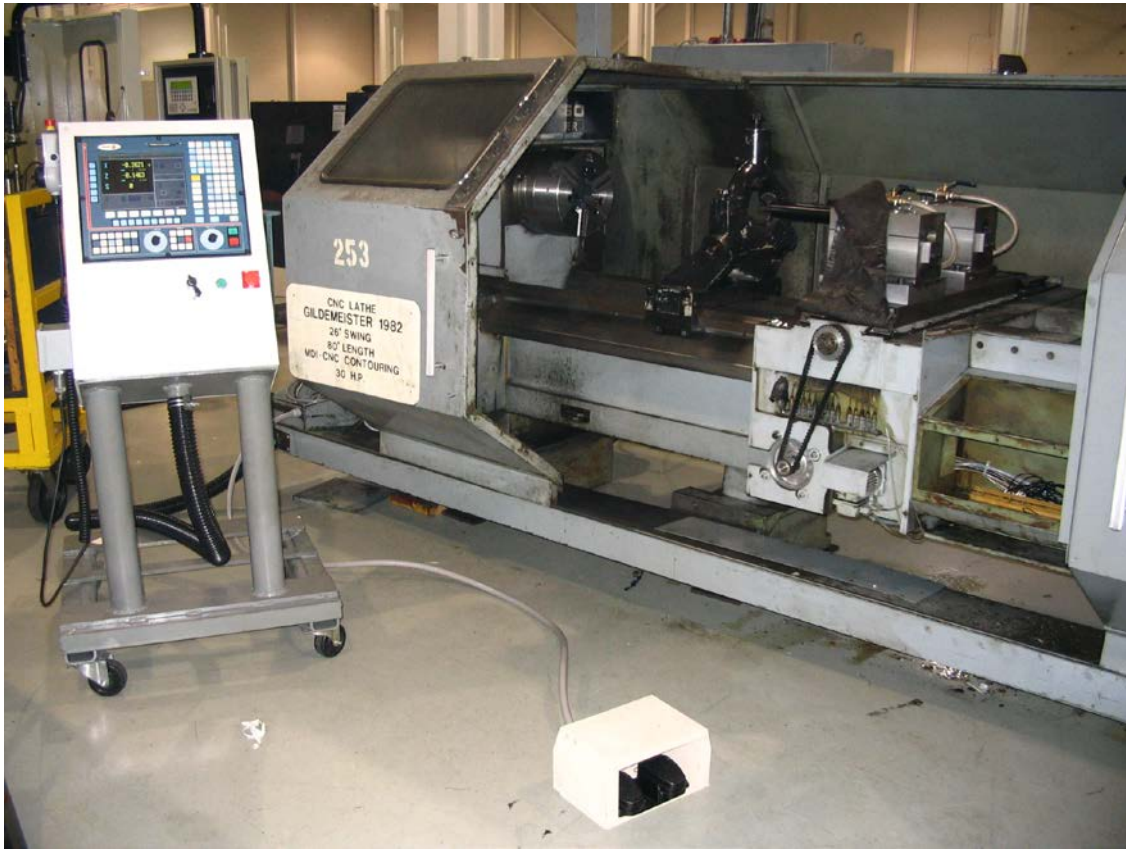
CNC Control Retrofit



This machine is located in North York, Ontario. It is a 4 axis CNC mill that is designed to mill up to 24ft long aluminum extrusions for the industrial building construction.

We did the complete CNC control retrofit for this new 4 axis CNC machine.

CNC Controls and Mechanical Retrofit In Progress (Waterloo, Ontario)



- Complete rebuild of control system
- Fully digital fiber-optic sercos communication between CNC & Drives
- Two axes AC servo Motor & Drives
- New hydraulic chuck (new feature)
- New safety door interlock with solenoid locking system to prevent the door opening when the spindle is running
- Foot switch for operating the chuck
- Digital remote I/O system.
- Completely rewired with new cables.
- System fully certified by the Electrical Safety Authority.

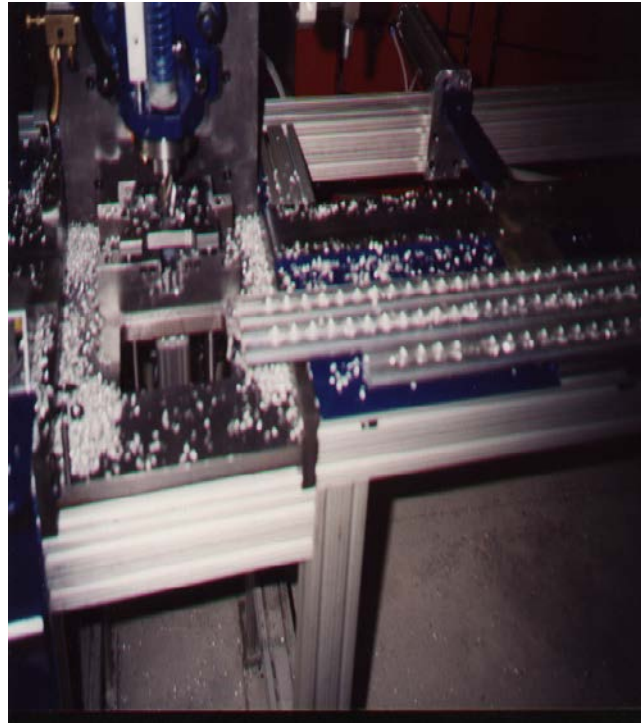
CNC controls for NEW machine Atomic Energy of Canada (AECL Chalk River Plant)



This is a two axes CNC lathe control complete with AC servo motors and drives. The control system was completely designed and built in house for AECL chalk river plant for their laboratory machining radioactive material.

CNC Track Milling Machine

Special purpose PC based fully automated CNC machine to mill seat mounting tracks for the automotive industry.



The machine was built for a customer in Cambridge, Ontario. At the time the customer had just obtained the right to build the tracks and was having the tracks processed on a regular CNC machine and it was too costly and time consuming. With the CNC track milling machine the company expanded many times over and has since moved to the USA and set up shop there closer to the customers. These tracks are also used in the aircraft industry for mounting seats in the aircrafts.

Packaging Machine 2,300 cups per minute

(Photograph not shown due to proprietary nature.)

The machine is located in Mississauga and packages 2,300 medicine cups per minute. Before the machine was built the company could not compete with China and was in the verge of closing down. After the development of the machine the company is now working 24/7 and competing head on with China. Two machines were built and one is on standby. Most of the cups are exported to the USA.

The machine has the following features.

- Fully digital system
- A small shoebox PLC is doing absolute position control through a 400 watt AC servo drive. This makes the machine very cost effective at a fraction of the cost. Usually the controls would have been designed around an rack mounted modular PLC. The CPU and motion control together would have cost more that the cost of the entire control.
- The machine is also very reliable.
- Automated system that is simple to operate.

Many similar special-purpose one-of-a-kind machines have been built.