

Lehnen Industrial Services Inc.

Experience - Creativity - Craftsmanship

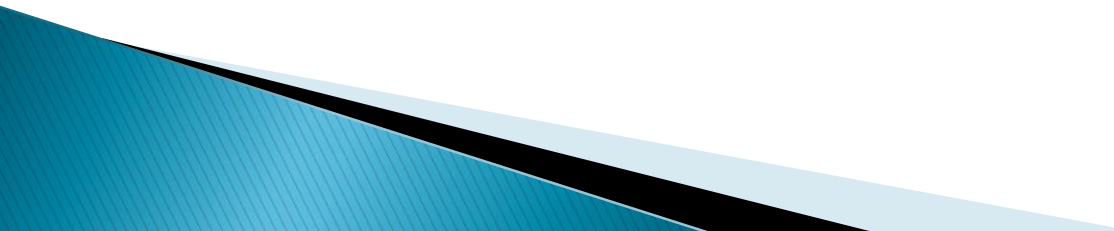
*Process Control and Custom Machinery
for Science and Industry*



Lehnen Industrial Services is committed to being a reliable partner to our customers; delivering creative and elegant solutions for their manufacturing needs; supporting our community; and creating a caring and fulfilling work experience for our staff.



Our focus is on...

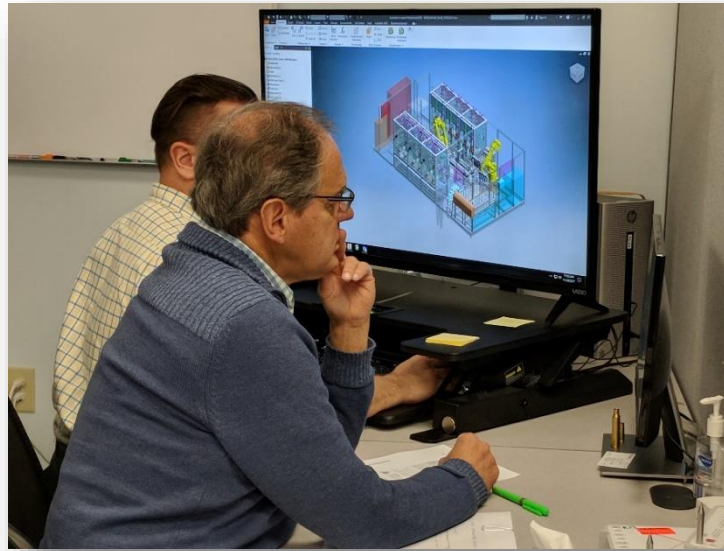
- Production machine design & build primarily for life-sciences clients
 - Research and laboratory equipment design & build
 - Machine control system design & build
 - Software development
 - Machine vision
 - Safety & Ergonomics
 - Modeling & Visualization
- 

We specialize in solving hard problems in manufacturing.

Our team works closely with yours through every step of the project. Strong concepts emerge through communication and creative thinking, and our process fosters both. It all starts with...

Understanding

We start by listening. You're here because you've encountered an obstacle in your manufacturing process.



The first step toward a solution is understanding. We make sure we get this step right.

Collaboration

Once we fully grasp your challenges, we combine our experience with yours to develop a concept.



Communication never stops.

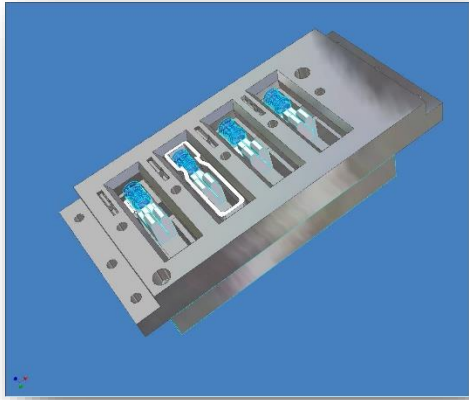
Visualization

We bring the proposed solution to life through CAD models, animations, and even virtual reality where you can interact with it.



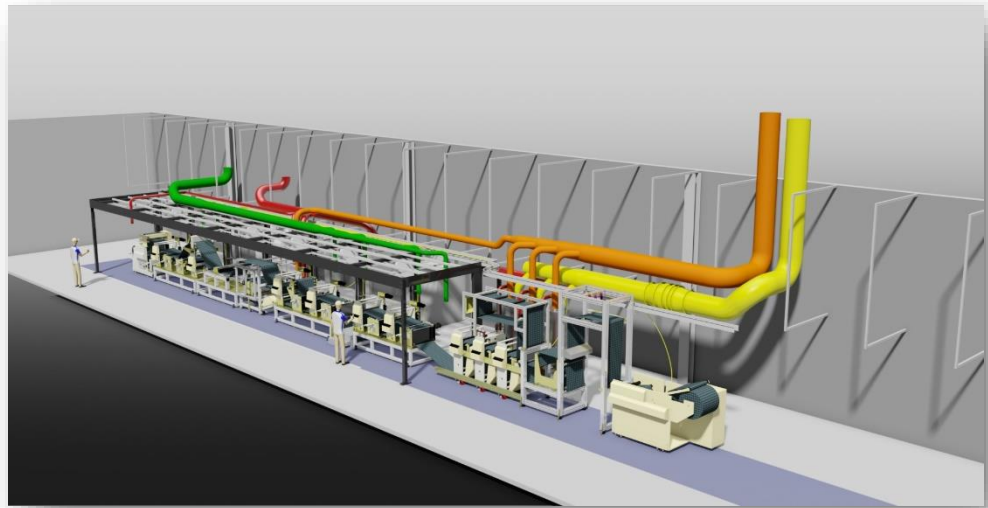
We strive to create clarity of concept that inspires creative input from your team and ours.

Design

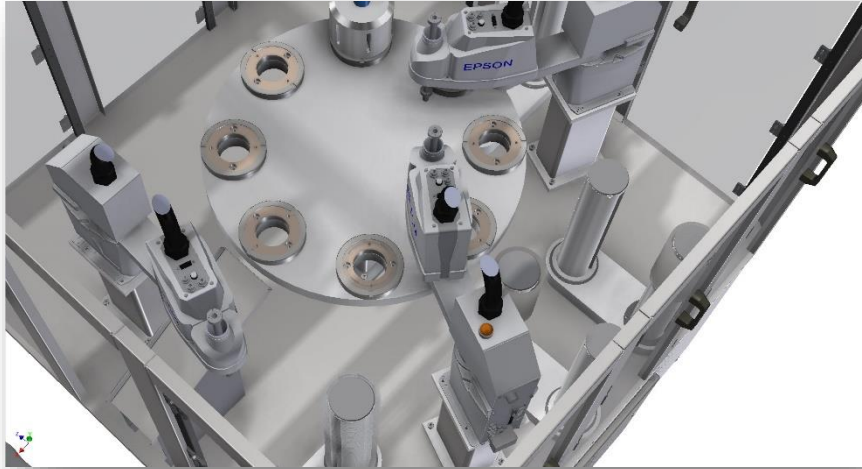


We have designed solutions
for the processing of tiny
needles...

...to major production
lines

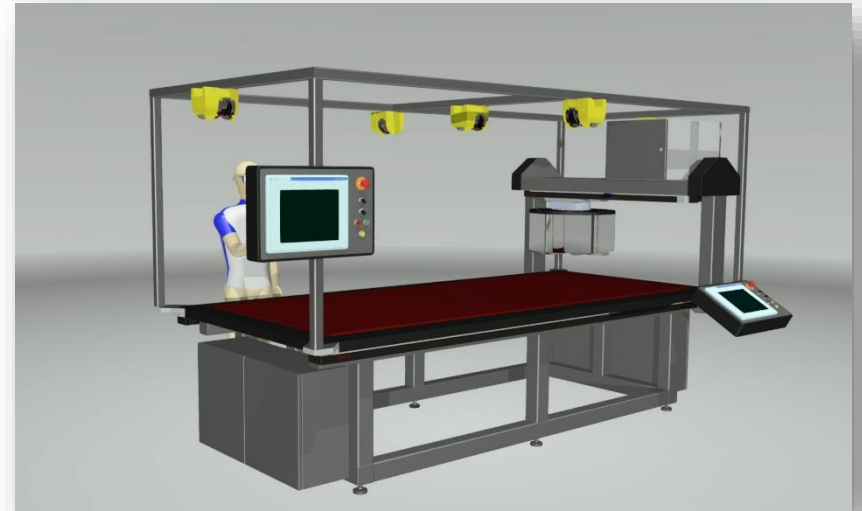


Design



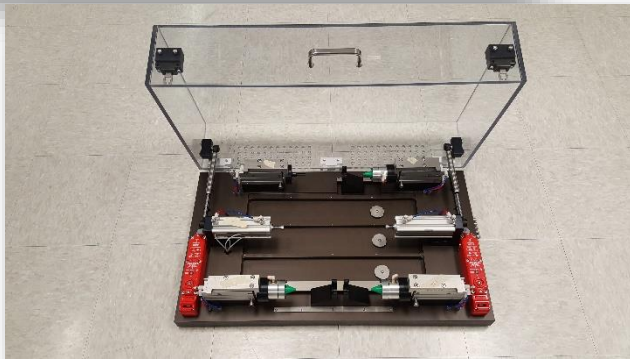
We use both flexible automation, as with this robot-based machine for assembling heaters...

...and hard automation for projects like this purpose-built bonding machine.



Build

We build what we design whether it's small...



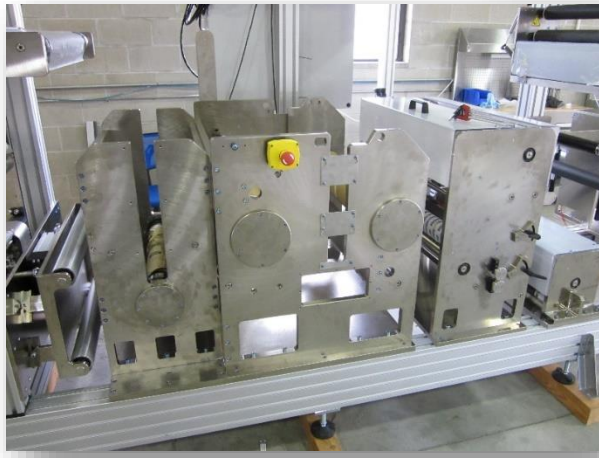
Build

...mid-sized...



Build

...or large. For web...



Build



...pharma...



Build

... or for truly unique applications.



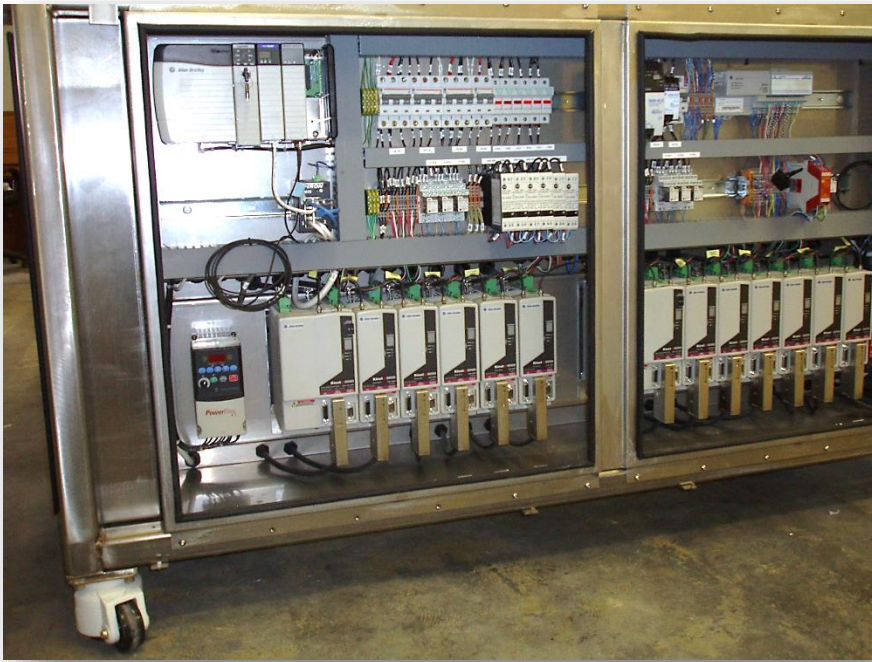
Electrical Controls

We specialize in designing control systems for equipment with a large number of coordinated servo axes

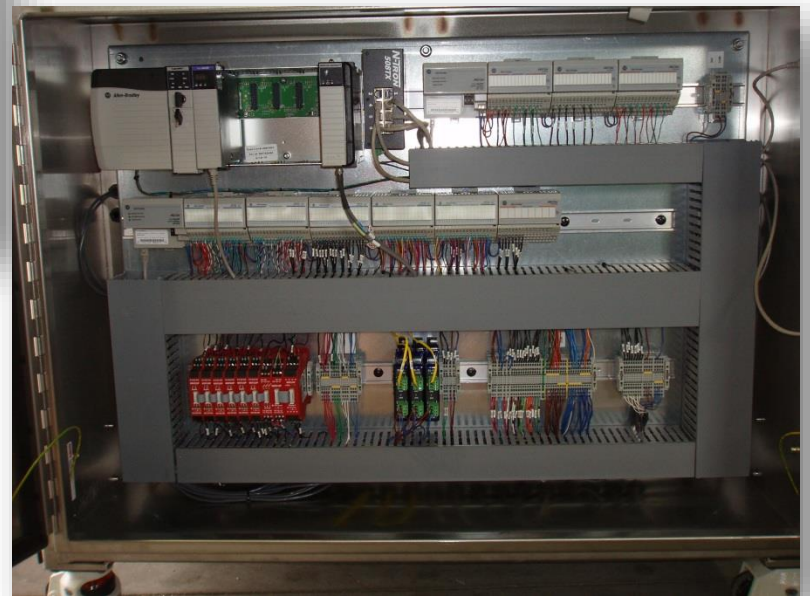
for industrial systems...



Electrical Controls



...and life sciences systems.

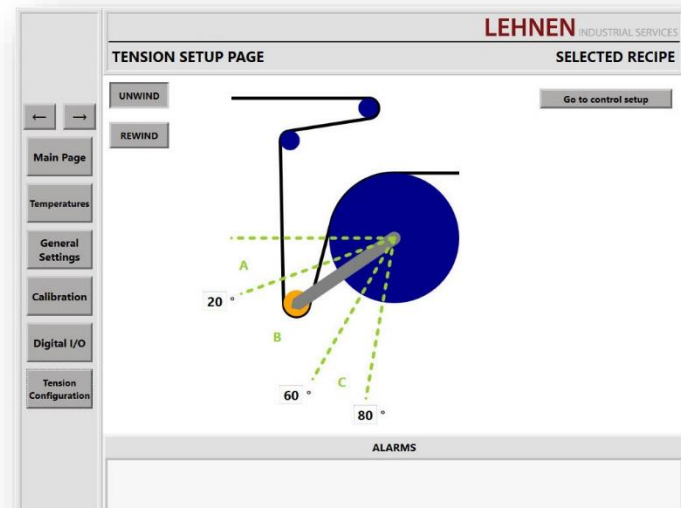


Software Solutions



For advanced tension control, servo-based force control, recipe handling, or complex sequencing, our PLC software runs the show.

We have the ability to create PLC, HMI and SCADA software in house.

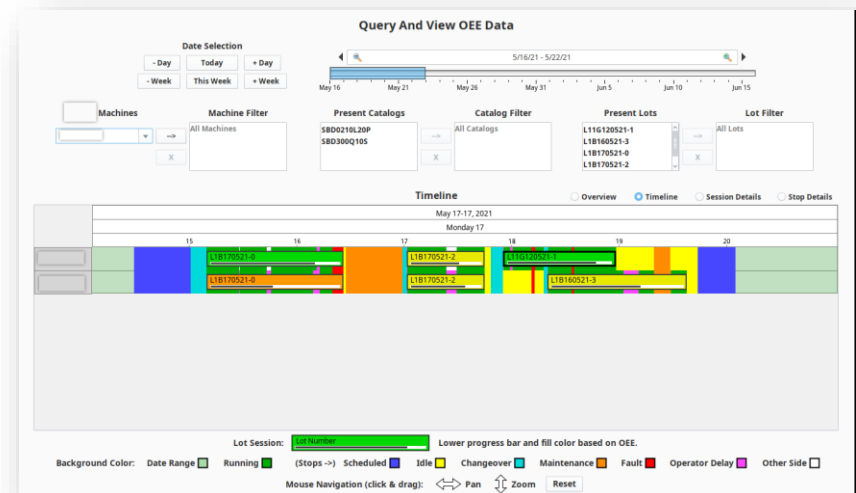


Software Solutions



Our SCADA software facilitates the effective collection of OEE, process, and quality data from the plant floor.

Our custom approach ensures the design fits your needs.

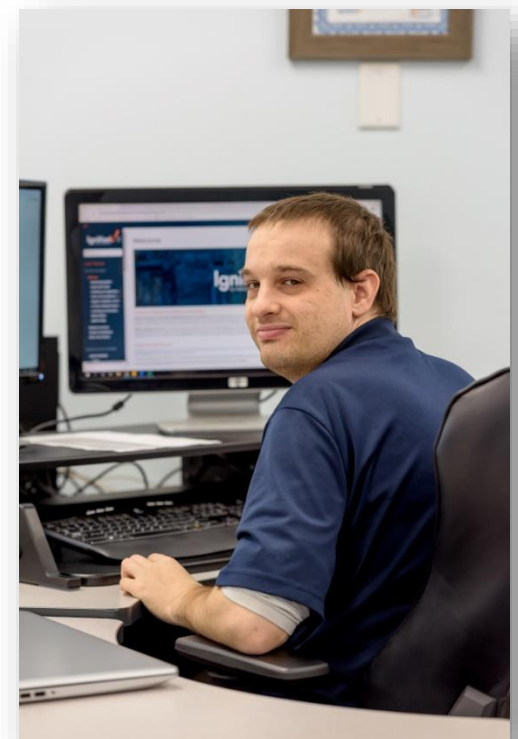


Facilities



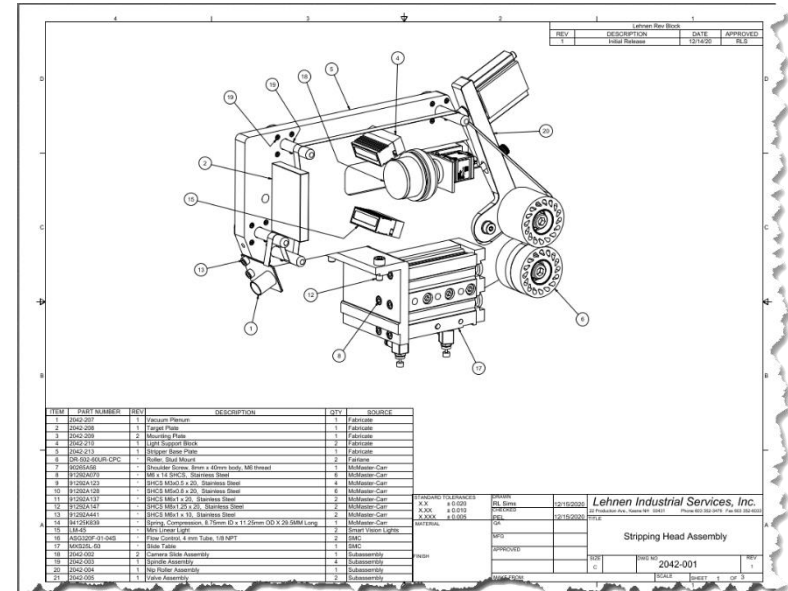
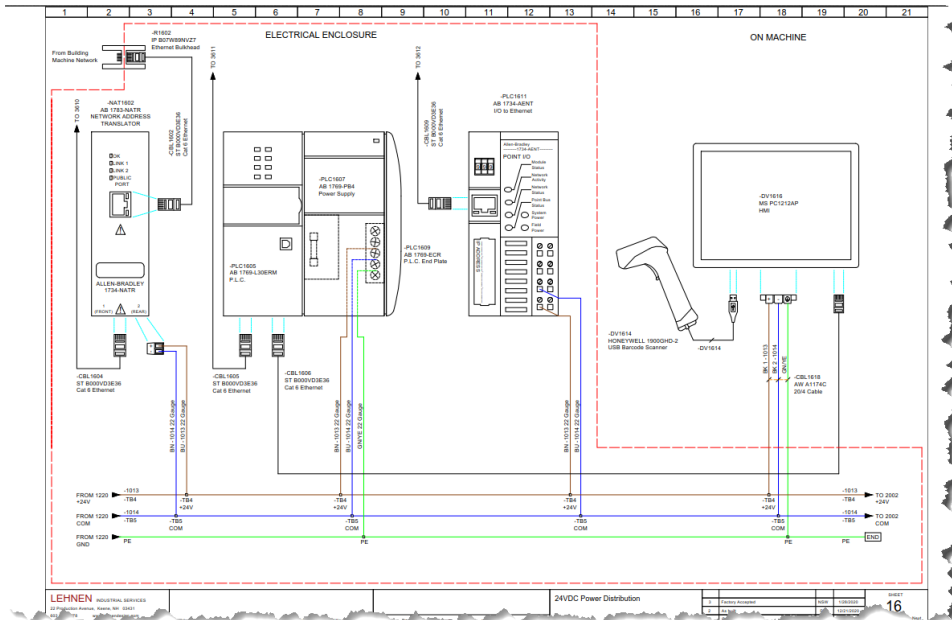
Our facility houses our model shop, office space, and production floor. Almost everything we do takes place under one roof. All engineering, documentation, prototyping, and software (including PLC, HMI, and Database programming) are done in house.

We contract out machining, fabrication, and metal plating.



Documentation

We create all of our documentation in house.



4.0 Opening a Lot / Loading a Recipe

The following section is a step by step guide to properly open a lot to start a cutting sequence. This sequence is also how the operator can change the active recipe. In order to change recipes, the operator needs to close the active recipe first. This will be covered in the following section, 4.1.

Step:	Description:	Visual Aid:
01	Click the button on the main page of the HMI that says Load.	
02	A popup will appear. Scan or enter the desired recipe into the text field.	
03	The continue button will stay disabled until a recipe match is found. This feature is cap-sensitive and will display a "No Match" value if the recipe does not match exactly.	
04	If the display box shows "Match Found" and is the desired recipe, press the continue button to move to the next phase. The continue button will send those recipe values to the PLC and bring up the "Install Tooling" popup to begin the poka-yoke phase.	
05	Begin the poka-yoke phase. First install all of the required tooling. The required tooling is displayed in the top five display fields of the install tooling popup. There will always be two bushings required, (left and right), up to ten feed wheels, and up to six guides. Scan each piece of tooling using the attached barcode scanner. The corresponding LED display will light up green when the correct tooling is scanned. Note: the LED lights for the wheels and guides are ordered by	

We are guided by our core values of responsibility, caring, and a dedication to furthering the general good.

Teamwork

Delivering value to our team is as important to us as delivering value to you. We work hard and have fun doing it by experiencing designs in VR...



...Friday lunches with customers...



... or building picnic tables for outdoor breaks. (An engineer and purchasing agent using tools – yikes!)



Keene, NH

Where we live and work.





22 Production Avenue
Keene, NH 03431

(603)352-3478

www.lehnendesign.com

info@lehnendesign.com