

Issue No. 310  
FREE SUBSCRIPTION

Gateway  
TO Manufacturing

THE NORTHEAST'S TOP MANUFACTURING RESOURCE

**Meet F.M. Callahan & Son. serving the aerospace, defense, automotive, biomedical, communications, and other industries since 1910.**

[ see page 3 ]

**How Can Robots Make Your Manufacturing Plant More Efficient?**

[ see page 11 ]



AUGUST / SEPTEMBER 2025

BE SURE TO SHARE YOUR STORIES: [WWW.THEGATEWAYMAG.COM](http://WWW.THEGATEWAYMAG.COM)

# C o n t e n t s

AUGUST / SEPTEMBER 2025 | ISSUE 310

## INDUSTRY INSIGHTS

**03** Company showcase: F.M. Callahan & Son.

**11** How Can Robots Make Your Manufacturing Plant More Efficient?

The first feature we have for you this month is from our friend Richard Taylor who wrote about F.M. Callahan & Son, an industrial plating company based in Malden, MA, that has been in operation since 1910. The family-owned business specializes in plating precious metals such as silver and gold, as well as electroless nickel, sulfamate nickel, zinc, copper, tin, and tin-leads. They also offer surface treatments like black oxide, pickling, passivating, and chromating. The company is NADCAP and ISO 9000 certified, with President Eric Jacklin noting that the NADCAP certification is more specific and intense, earning trust from major companies like Boeing, GE, and Rolls-Royce. F.M. Callahan & Son is also a regular exhibitor at trade shows like the Design 2 Part Trade Shows to connect with new and existing customers.

Due to increasing pressures to improve efficiency, reduce costs, and maintain quality, manufacturers are turning to robotic automation. Our second article this month, submitted by Buddharatn Ratawal from Delmia, highlights several key benefits of integrating robots into manufacturing plants. These benefits include increased productivity, quality, and throughput through faster processing and 24/7 operation, as well as cost reductions from lower labor costs and reduced material waste. Additionally, robots enhance plant safety by handling dangerous or physically demanding tasks and offer greater flexibility and scalability due to their ability to be quickly reprogrammed and integrated. Finally, robots provide valuable data collection and analytics, enabling real-time monitoring and predictive maintenance to minimize downtime.

Ready to submit your own thoughts? Send along 1,000+ words and any applicable imagery and we'd be happy to consider it for publication in a future issue of the Gateway. We're all ears! Submit to: [chris@thegatewaymag.com](mailto:chris@thegatewaymag.com).



# Gateway TO Manufacturing

## PUBLICATION MANAGER

Matthias Roberge

## EDITORIAL DIRECTOR

Chris Hislop

## ART DIRECTOR

Adam Kaufmann

## ADVERTISING INQUIRIES

(877) 463-4020

[info@thegatewaymag.com](mailto:info@thegatewaymag.com)

Hours: 9am-5pm Mon-Fri

## MAILING ADDRESS

PO Box 70

Portsmouth, NH 03802

## FOR FREE SUBSCRIPTIONS

[www.thegatewaymag.com](http://www.thegatewaymag.com)

## CHANGE OF ADDRESS:

In ordering a change of address, give both the old and new addresses. Allow two months for change to become effective. The publisher will attempt to handle unsolicited articles with care, but magazine assumes no responsibility for them.



© 2025: *Reproduction in whole or in part without permission is strictly prohibited.*

# Metal Stampings

Double Action Deep Drawing

Washers • Discs • Rings  
**UP TO 80" Diameter**  
**500 TON CAPACITY**

Stampings to 3/4" thick  
 Short or long runs  
 Wire EDM



Tool & Die Makers  
 Quick Turn Around  
 CAD/CAM Design

## Peter Forg Mfg. Co.

130 YEARS OLD AND GROWING

888-625-4577 Fax 617-625-0331  
 50 PARK ST. PO Box 433 SOMERVILLE, MA 02143  
[www.peterforg.com](http://www.peterforg.com)

## F.M. Callahan & Son, Inc.



Celebrating over 100 years as the longest running metal finishing company in the nation.

F.M. Callahan & Sons is a NADCAP Certified, ISO 9001, and ROHS compliant precision plating house. Specialist in Plating, electroplating & anodizing, and rack and barrel plating.

Callahan Plating serves all industries while being a key supplier of services to the Aerospace industry.

PLATED FINISHES

SURFACE TREATMENTS

ANODIZING



[fmcallahan.com](http://fmcallahan.com) [inquiry@fmcallahan.com](mailto:inquiry@fmcallahan.com)

(781) 324 - 5101 22 Sharon Street | Malden, MA 02148

## HEAT TREATING

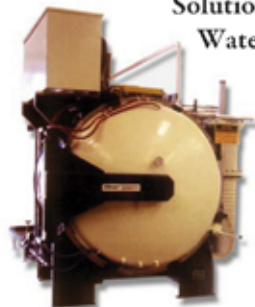
Vacuum High Pressure Quench  
 Non - Ferrous Heat Treat

Austempering  
 Marquenching  
 Carburizing

Nitrogen Tempering  
 Solution Heat Treating  
 Water Quenching

### MATERIALS

High Speed Steels  
 Alloy Steels  
 Tool Steels  
 Stainless Steel  
 Aluminum  
 Plastics



**HARDLINE**  
 HEAT TREATING, INC.

### OTHER SERVICES

- Bright Hardening
- Cryogenics to -300°F
- Glass Bead Blast
- Grit Blast Clean
- Plastics Thermal Treatment
- Precipitation Hardening
- Anneal & Normalization
- Metallography
- Stress Relieving

Consistent On Time Delivery  
 Pickup & Delivery Available  
 Member MTI / ASM



AS9100

AEROSPACE & DEFENSE

134 Ashland Ave. Southbridge, MA 01550  
[www.hardlineheattreating.com](http://www.hardlineheattreating.com)

Tel: (508) 764-6669 Fax: (508) 764-6654

**NEW!**  
 PATENT PENDING

## DESKTOP SLIDE CLAMP

Perfect for Your Desktop

3 Options in 1 Compact Low Profile Design!



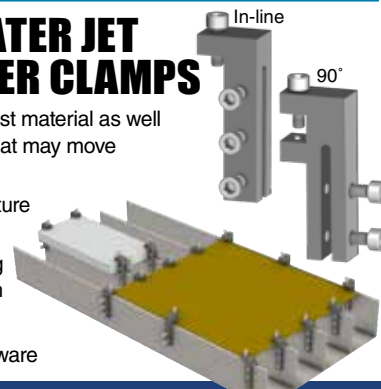
- ③ 7075 Serrated face is machinable
- ③ Steel version available soon
- ③ M6 drive & mounting bolts
- ③ Positive down force
- ③ 200 lbs of HF for every Ft Lb of torque

**NEW!**  
 PATENT PENDING

## WATER JET PINCHER CLAMPS

- ③ Ability to clamp thinnest material as well as thicker material that may move under pressure

- ③ In-line version to capture 2 sides of material
- ③ 90° version capturing 3rd side, possibly 4th
- ③ Type III Hardcoat
- ③ Stainless Steel hardware



Contact us today for more information!



Free Design Consults

800-543-3580 [MiteeBite.com](http://MiteeBite.com)



FOLLOW US ON SOCIAL MEDIA:



ISSUE 310

YOUR RESOURCE TO NEW MANUFACTURING SOURCES

**OVER 100 YEARS AS THE LONGEST RUNNING METAL FINISHING COMPANY IN THE NATION.**

**F.M. Callahan & Sons is a NADCAP Certified, ISO 9001, and ROHS compliant precision plating house. Specialist in Plating, electroplating & anodizing, and rack and barrel plating. Callahan Plating serves all industries while being a key supplier of services to the Aerospace industry.**



## **F.M. Callahan & Son, Inc.**

### *Meet F.M. Callahan*

F.M. Callahan & Son (Malden, MA) has been plating parts since 1910 and is a NADCAP and ISO 9000 certified electroplater as well as being ITAR Registered.

This is an organization of specialists skilled in all phases of industrial plating. The company has combined ability, service, and quality to produce plating on sizes from microscopic pin-point to gigantic two-ton pieces.

The company specializes in the plating of precious metals of silver and gold, Electroless nickel, Sulfamate nickel, Zinc, Copper, Tin, and Tin-leads. Our surface treatments include black oxide, pickling, passivating, conversion coating, and also chromating.

F.M. Callahan & Son is a full-service company with over a 40,000 square foot state of the art facility and has 100 plus years of family ownership.

### *Certifications*

The company has been NADCAP certified for approximately twenty years. This important standard indicates that accredited shops follow documented guidelines on how the parts are processed. The result is a consistently plated part.

Company President Eric Jacklin is in a good position to compare the two quality certification programs. “NADCAP tends to be more specific and a lot more intense than ISO,” he says. “For NADCAP, the auditors that come in are trained in metal finishing. They may have particular expertise in one area, such as anodizing; but they have also worked in the finishing industry and in the labs. Thus, they have a very specific checklist.”

“We have ISO 9000 as well, and it is looking at specific quality things. But, it is more general than the NADCAP. It deals with what you are actually doing; whether it is welding or chemical processing or something else,” he concludes.

Jacklin believes the NADCAP certification is worth the intense auditing process. “If you are NADCAP certified you are probably also GE certified or Rolls-Royce certified, he says. “The Boeings of the world really trust the NADCAP system. They are leaning more on the NADCAP auditors and doing a lot fewer specific prime audits themselves.”



International  
Organization for  
Standardization



## WANTED OLD GAS FORK LIFTS



We Buy Old Forklifts for  
Parts. Gas or Electric,  
Large or Small,  
Running or Not.

We pay reasonable prices.  
Call Walt 860-508-9164  
Will Pick Up and Pay Cash

**Also Electric Forklift Batteries Wanted**

## WANTED OLD ELECTRIC FORK LIFTS

Wanted Used Electric Forklifts,  
running or not.

Also looking for LARGE  
Used Batteries good or bad.  
Must be reasonable, we pick  
up and pay cash.

Call Walt: 860-508-9164



## DYNAMIC BALANCING



*Industrial, Medical & Commercial  
applications from one piece to large production runs.*

Pump Impellers - Fan Wheels - Prototype Development  
Gears - Motor Armatures - Sheaves and Pulleys -  
Flywheels - Couplings - Much More

8 Donnelly Road, PO Box 303 Spencer, MA 01562

[www.ne-spintech.com](http://www.ne-spintech.com)

Tel: 508-885-5300 Fax: 508-635-6831

AS9100 Certified • ITAR Registered

Custom Molder of Thermoplastics  
Thermosets, and Elastomers.

Small Parts - Small Quantities

[Quadra-tek.com](http://Quadra-tek.com) / 1-802-375-6139

2617 VT Rte 7A Arlington, VT 05250

- ✓ Precision Machining
- ✓ Toolmaking
- ✓ Jig Grinding Service



## CLASSIC JIG GRINDING

[jiggrind@classicjiggrinding.com](mailto:jiggrind@classicjiggrinding.com)

860-870-4900

**National  
Chromium**

(860) 928-7965

(860) 928-7965

Fax (860) 928-1408

10 Senexet Road • Putnam, Connecticut • 06260

Plating of Hard Chrome, Electroless Nickel,  
Mass Finishing Media, Equipment and Supplies  
Mass Finishing, Tumbling & Deburring  
Web Page: [www.nationalchromium.com](http://www.nationalchromium.com)



## FABRICATION & MACHINING FOR ALL INDUSTRIES

CNC Milling/Turning	Manual Milling/Turning
VMC: 40" x 120"	Vertical Milling: 40" x 250"
HMC: 78" x 118"	Horizontal Milling: 72" x 72"
Turning: 16" x 24" cc	Turning: 48" x 240" cc

AWS Certified Welders • ISO 9000 Compliant



## Innovative MACHINE • INC.

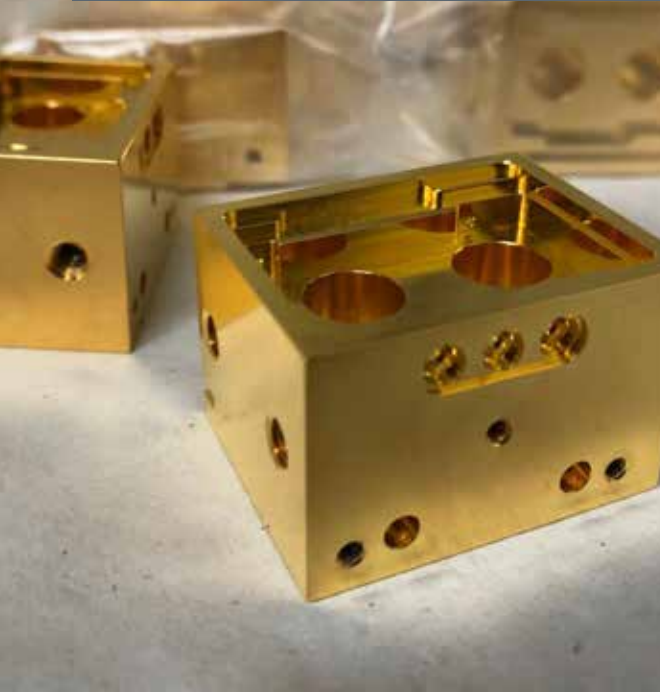
40 Snow Road • Winchester, NH 03470

Tel: 603-239-8082

Contact: Terry Haskins

[www.innovative-machine.com](http://www.innovative-machine.com)

[tmhaskins@innovative-machine.com](mailto:tmhaskins@innovative-machine.com)



## *F.M. Callahan On Display*

Reaching out to current customers and NEW ones; the company has invested their efforts in the area's leading Industrial Showcases such as The Design 2 Part Trade Shows of MA, CT, and New York.

F.M. Callahan & Son has, over the years, been a consistent Exhibitor at the Design 2 Part shows held in in CT, New York, and the event held each early October at the Royal Plaza Trade Center in Marlboro, MA. This is the region's largest design and contract manufacturing trade show.

This show allows attendees the opportunity to search for anything from design ideas to custom and stock parts or through final assembly alternatives. The Show also allows for these Manufacturers from New England and nationwide to have the opportunity to meet high-quality, reliable, American job shops and contract manufacturers who can help build their products better.

The October Show has over 250 exhibiting companies and includes were F.M. Callahan's Eric Jacklin (Company President) who enthusiastically covers the Callahan booth over two days while talking and meeting with numerous company representatives who are looking to find new suppliers to improve their quality, reduce their manufacturing costs, and shorten time-to-market for their products.

Eric Jacklin, commenting on his own company's experience at the Show, says that "I totally enjoy the experience of being an Exhibitor at the Display 2 Part Show and meeting the traffic of key people walking the show's aisles; it is always so impressive! We are always able to generate sales leads with not only new accounts but existing accounts as well. It is gratifying to see our customers that we have talked with for years and are able to provide a number of these accounts with new ideas for future projects."



**WHEN YOU NEED TO MOVE  
ONE MACHINE OR  
AN ENTIRE FACILITY,  
CALL US**



**800-521-5534**

Look to ITS when you're in need of a superior rigging contractor. For nearly 40 years, ITS has excelled at installing, handling, and relocating manufacturing equipment. Whether it's one machine or an entire facility, you'll receive exemplary service done safely, on time, and on budget.

Your once in a lifetime move is what we do everyday.

[industrialtransfer.com](http://industrialtransfer.com)

**TDF Metal Finishing, Inc.**  
7 & 9 Electronics Ave Danvers, MA 01923

**PROCESS**

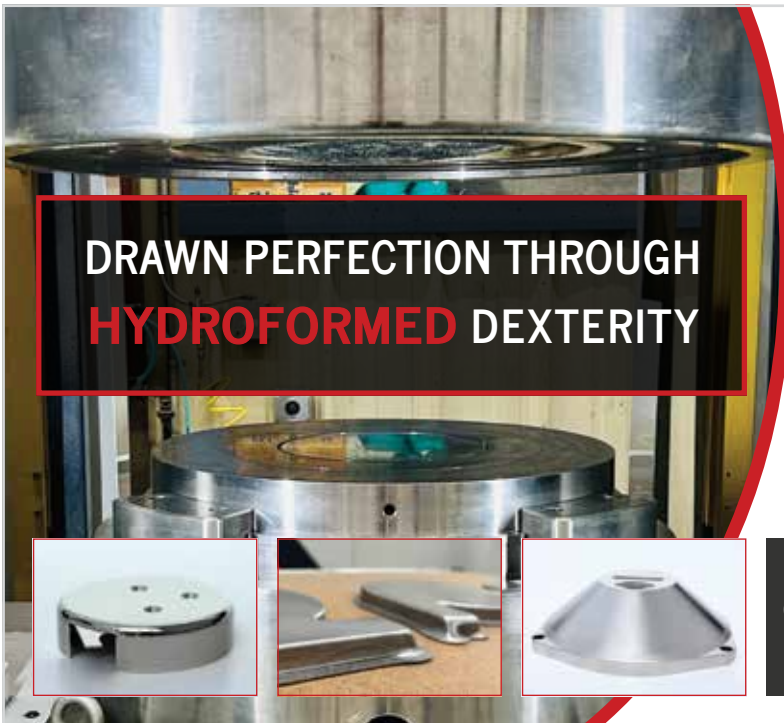
- ▶ Anodizing, Black, Clear, Red, Blue, Gold, Green
- ▶ Anodize, Hard
- ▶ Black Ebonal
- ▶ Black Oxide
- ▶ Black Passivate
- ▶ Brass
- ▶ Bright & Matte Tin
- ▶ Bright Dip
- ▶ Bright Nickel
- ▶ Cadmium
- ▶ Caustic Etching
- ▶ Chemical Film
- ▶ Copper
- ▶ Electroless Nickel
- ▶ Electropolish
- ▶ Gold
- ▶ Passivate
- ▶ Phosphate
- ▶ Pickling
- ▶ Rhodium
- ▶ Silver
- ▶ Zinc

**SERVICES**

- Clean Room Finishing
- Sandblasting
- Baking—High Temperature
- Salt Spray Corrosion Testing
- X-ray Florescence Thickness
- Vapor Blasting
- Buffing
- ROHS COMPLIANT CHEMICAL FILM
- ROHS COMPLIANT ZINC
- Environmentally Responsible
- High Tech Waste Management
- Quick Turnaround
- Sample Pieces

ISO 9001:2008, 8251QM8001, 11 May 2013

**Tel: 978-223-4292 Fax: 978-223-4297**  
Web: [www.tdfmetalfinishing.com](http://www.tdfmetalfinishing.com) Email: [tdinfo@tdmetalfinishing.com](mailto:tdinfo@tdmetalfinishing.com)



**DRAWN PERFECTION THROUGH  
HYDROFORMED DEXTERITY**



# MuShield®

AS:9100D | ISO 9001:2015 Certified | ITAR Registered Company

MuShield has over 60 years of experience producing hydroformed parts out of mu-metal magnetic shielding alloys, as well as other alloys such as aluminum, stainless steel and many other materials.



For Orders and Pricing:  
Contact MuShield today for more information  
**[ 888.669.3549 ]**

The Mushield Company, 9 Ricker Avenue, Londonderry, NH 03053 | Toll Free: 888.669.3539 | [info@MuShield.com](mailto:info@MuShield.com)  
[MuShield.com](http://MuShield.com) | [MuMetal.com](http://MuMetal.com) | [HydroformingManufacturing.com](http://HydroformingManufacturing.com) | [CryoPermShielding.com](http://CryoPermShielding.com)



F.M. Callahan & Son, Inc. currently plates precious metals of silver, gold, electroless nickel, sulfamate nickel, zinc, copper, tin, and tin-leads in a 40,000 square foot facility on Eastern Avenue.

Their services also include black oxide, pickling, passivating, iridating and chromating. F.M. Callahan & Son, Inc.'s history of military and aerospace work continues under the quality certifications of NADCAP and ISO 9001.

F.M. Callahan's Logo is "Where the Finish Comes First" This is an organization of specialists skilled in all phases of industrial plating. Since 1910 the company has combined ability, service, and quality to produce plating on sizes from microscopic pinpoint to gigantic two-ton pieces. Close co-operation between all departments, developing, plating, maintenance, inspection, and the front office means superior workmanship for you.



## F.M. Callahan & Son, Inc.

### Contact Information:

22 Sharon Street Malden, MA 02148

Tel: **781-324-5101**

Web: [www.fmcallahan.com](http://www.fmcallahan.com)

E-mail: [ejacklin@fmcallahan.com](mailto:ejacklin@fmcallahan.com)

HAVE A STORY IDEA? LIKE WHAT YOU'RE READING?

*We would like to hear it. Contact us to give us your input or feedback.  
We're always looking for new stories to discuss.*

**chris@thegatewaymag.com or Call: (877) 463-4020**



# VACUUM AND ATMOSPHERE HEAT TREATING + BLACK OXIDING

## PROCESSES

- ◆ Hardening
- ◆ Tempering
- ◆ Annealing
- ◆ Carburizing
- ◆ Carbo-nitriding
- ◆ Normalizing
- ◆ Stress Relieving
- ◆ Precipitation HT
- Commercial Black Oxide
- ISO 9001 and AS 9100



**Federal  
Firearms  
License**

## MATERIALS

- ◆ Tool Steels
- ◆ Stainless Steels
- ◆ High Speed Steels
- ◆ Alloy Steels
- ◆ Carbon Steels
- ◆ Super Alloys
- ◆ Non-Ferrous
- ◆ PH Steels



**Tel: 860-523-9090**  
**Fax: 860-236-8052**  
 565 Cedar Street  
 Newington, CT 06111  
**Andy@sousacorp.com**  
**www.sousacorp.com**

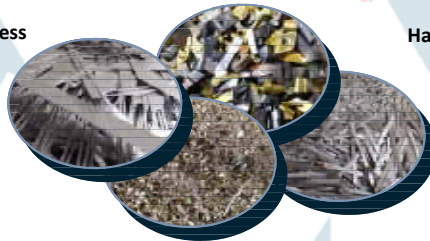
- Tungsten Carbide
- EDM Wire
- Inconel
- Titanium
- Ferrous
- Nonferrous

*Specializing in Recycling Industrial Scrap*

# HARDING METALS, INC

Creating recycling solutions for any type of business

- Utilizing our easy to deal with staff
- With our clean and uniform equipment



Handling all types of metals, in any form

—From mild steel to high-temp aerospace alloys

—Chips, punchings, turnings, borings, skeletons, inserts, bits. **You produce it; we handle it.**

**Call or email us about Recycling and Reconditioning your Cutting Fluids**

**1-800-370-JUNK (5865)**

**42 Harding Dr. Northwood, NH 03261**

**info@hardingmetals.com**

**www.hardingmetals.com**

*Big enough to get things done, small enough to do them efficiently.*



# MuShield®

AS:9100D | ISO 9001:2015 Certified | ITAR Registered Company

MuShield has a longstanding history of in-house heat treating using our hydrogen furnace and state of the art vacuum furnace. We apply specialized heat treating cycles to every project on our production floor.



For Orders and Pricing:  
Contact MuShield today for more information  
[ 888.669.3549 ]

The Mushield Company, 9 Ricker Avenue, Londonderry, NH 03053 | Toll Free: 888.669.3539 | info@MuShield.com  
MuShield.com | MuMetal.com | HydroformingManufacturing.com | CryoPermShielding.com



## SHARPLES

CREATIVE. INTRICATE. EXCEPTIONAL.

# WATERJET CUTTING

Abrasive and non-abrasive waterjet cutting provides:

- Large Bed Capacity
- No Added Heat
- Cutting of Virtually Any Material
- Superior Nesting
- Available in Tumble and Bead Blast Finishing
- High Position Accuracy
- Small or Large Runs

CALL 508-695-5656 OR VISIT SHARPLESCUT.COM

## Teflon™ coatings

Improve part performance with unique properties of Teflon™ coatings!

Coatings can be applied to:

- metals
- elastomers
- ceramics
- composites
- rubber
- glass

As a licensed industrial applicator, Donwell...

- provides custom coating services to your specifications.
- coats both small and large parts to close tolerances in quantities from 1 to 1,000,000.
- has over 50 years of high-performance coating application expertise.

**DONWELL COMPANY**  
1-800-864-2702  
www.donwell.com  
For FREE Coating Sample

Use of the Teflon™ mark requires a direct Trademark license. Customers and distributors of Donwell can only resell LICENSEE's product as licensed with the Teflon™ mark.



FOLLOW US ON SOCIAL MEDIA:



# Wire & Sinker EDM Services



- ⚙️ 5 Axis Wire EDM
- ⚙️ Orbiting Sinker EDM

Tel: 207-743-7273

Fax: 207-743-7269

**NORTHEAST** TOOL & DIE CO., Inc.



- ⚙️ Metal Stampings
- ⚙️ Precision Machining
- ⚙️ Prototypes
- ⚙️ Fixture Tooling
- ⚙️ Compound Dies
- ⚙️ Progressive Dies
- ⚙️ Secondary Dies
- ⚙️ Injection Molds

Quality Tooling Solutions since 1992

PO Box 28

16 Aldrich Ave.

Norway, ME 04268

[www.northeasttool.com](http://www.northeasttool.com)



## EXPERIENCE THE UGM DIFFERENCE

*SINCE 1954, UNITED GEAR & MACHINE HAS BEEN USING INDUSTRY LEADING MACHINERY AND TOOLING TO MANUFACTURE PRECISION SPLINES AND GEARS FOR THE SPACE, DEFENSE AND AEROSPACE INDUSTRIES.*

- ⚙️ OVER 40 GEAR SHAPING AND HOBBING MACHINES
- ⚙️ WE OFFER CNC GEAR GRINDING
- ⚙️ WE CUT SPUR GEARS, INTERNAL & EXTERNAL SPLINES, WORMS, WORM GEARS, CROWNS, HELICAL GEARS, RACKS, TIMING BELTS AND BLIND KEYWAYS
- ⚙️ ON SITE BROACHING FACILITY FOR INTERNAL SPLINES, SERRATIONS AND KEYWAYS
- ⚙️ INDUSTRY LEADING INSPECTION EQUIPMENT WITH 2 GMM GEAR ANALYZERS
- ⚙️ IN HOUSE TOOL ROOM TO PRODUCE FIXTURES AND SUPPORT FOR GEAR SHOP
- ⚙️ LARGE ENOUGH TO MEET TECHNICAL DEMANDS, SMALL ENOUGH TO ADAPT TO IMMEDIATE NEEDS



1087 EAST STREET SOUTH, SUFFIELD, CT 06078 | [WWW.UNITEDGEARCT.COM](http://WWW.UNITEDGEARCT.COM) | 860.623.6618 | [SALES@UNITEDGEARCT.COM](mailto:SALES@UNITEDGEARCT.COM)



**PAUWAY CORP.**

THINK OF THE FINISH BEFORE YOU START!



Aerospace & Defense Painting • C.A.R.C. Coating Specialists  
 Dry Film Lube & Teflon Coatings • Industrial Painting  
 EM/RFI Shielding • Powder Coating • Silk Screening  
 Pad Printing • Laser Marking & Engraving • Contract Manufacturing  
 Assembly • Custom Packaging • Stripping & Sandblasting

866-247-4082  
 63 North Cherry Street  
 Wallingford, CT 06492

AS9100 & ISO 9001 Certified  
[www.pauwaycorp.com](http://www.pauwaycorp.com)

Federal Firearms Lic  
 # 6-06-009-07-7G-03042

**CT LASER**  
 & ENGRAVING

**YOUR ONE STOP SHOP  
 FOR ALL YOUR PART MARKING NEEDS**

203-265-9366 | [sales@ctlaserengraving.com](mailto:sales@ctlaserengraving.com)  
[www.ctlaserengraving.com](http://www.ctlaserengraving.com)

*“Part of being successful is about asking questions and listening to the answers.” – Anne Burrell*

# VACUUM AND ATMOSPHERE HEAT TREATING + BLACK OXIDING

## PROCESSES

- ◆ Hardening
- ◆ Tempering
- ◆ Annealing
- ◆ Carburizing
- ◆ Carbo-nitriding
- ◆ Normalizing
- ◆ Stress Relieving
- ◆ Precipitation HT
- Commercial Black Oxide
- ISO 9001 and AS 9100



**Federal  
Firearms  
License**

## MATERIALS

- ◆ Tool Steels
- ◆ Stainless Steels
- ◆ High Speed Steels
- ◆ Alloy Steels
- ◆ Carbon Steels
- ◆ Super Alloys
- ◆ Non-Ferrous
- ◆ PH Steels



Tel: 860-523-9090  
Fax: 860-236-8052  
565 Cedar Street  
Newington, CT 06111  
Andy@sousacorp.com  
www.sousacorp.com

# RIGGING AND HEAVY HAULING

- ◆ 70 Years Experience
- ◆ Forklift Capacity to 60,000 lbs
- ◆ Machinery Moving
- ◆ Mill-Wright Services
- ◆ Domestic & Export Crating
- ◆ Inside Storage / Warehousing



Tel. (603) - 623-1533  
**RIGGERS**  
lpcote.com

# ABLE Air

## Air Compressor Sales and Service

- We service ALL Brands of compressed air equipment
- Compressors, vacuum pumps, air dryers, blowers...etc.
- 24-hour emergency service
- Air piping design and installation
- Flow and KW metering

- Reliable
- Energy Efficient
- Fixed speed from 3 hp to 605 hp
- Direct coupled one-to-one drive compressors
- Variable speed drive compressors from 10 hp to 350 hp
- German engineering at its finest!
- Rotary screw compressors for every budget!



Serving  
Vermont,  
New Hampshire  
and Maine

www.ableairne.com



**KAESER**  
COMPRESSORS  
Built for a lifetime.

**New England's Original Dealer and Still the Best Place to Buy Your New Kaeser**

**For prompt, professional service, call: 1-800-462-0228**

Serving New England For Over 50 Years



FOLLOW US ON SOCIAL MEDIA:





## HOW CAN ROBOTS MAKE YOUR MANUFACTURING PLANT MORE EFFICIENT?

There's increasing pressure on manufacturing businesses to streamline processes, reduce costs and keep product quality at an all time high, despite rising costs and ever-decreasing access to top manufacturing talent. With that in mind, manufacturers are turning to autonomous solutions to improve production, accuracy and reduce costs over time, there's never been a better time to invest in robots for manufacturing firms. From assembly and material handling to welding, painting and quality control, robots play a vital role in automating a whole host of tasks in the manufacturing industry.

Buddharatn Ratawal, Sr. Manager, Strategic Business Development at DELMIA, takes a closer look at how robots can make your manufacturing operation more efficient, along with other key benefits of businesses making the switch to robots.

### *The Benefits of Robots in Manufacturing*

From increased productivity and cost reductions to enhanced data collection and employee safety, robots come with a whole host of benefits for manufacturing businesses.

#### **Increased Productivity, Quality and Throughput**

A key challenge for manufacturers is to ensure consistent quality of product, while also maintaining and optimizing workflows to improve productivity. There's a fine balance between potentially sacrificing quality for increased production, but with the integration of robots, this doesn't need to be a problem.

**Faster Processing:** Automated systems operate at consistent speeds, which are normally much faster than that of humans, which ensures production cycles complete more quickly. Speed is essential in manufacturing, and when paired with autonomous robots that can continuously replicate high-quality products, there's plenty of reason to invest in the technology.

**24/7 Operation:** Robots play a key role in allowing businesses to work continuously without any breaks, vacations or shift changes. This obviously increases the output significantly. When paired with a human who can keep a close eye on things, and be on hand to carry out any maintenance or repairs, robots are a no-brainer for making your manufacturing plant run more smoothly.

**Consistent Precision & Repeatability:** Robots are capable of performing repetitive tasks with extremely high accuracy, which leads to reduced product variability and defects. They're also able to replicate the exact same motion hundreds of thousands of times without the need for human intervention – which enables your manufacturing business to greatly increase output and lower quality issues.



## Cost Reductions

In today's economy, there's a consistent squeeze on businesses across all sectors to reduce costs, which is increasingly difficult with increasing overheads and material prices. While the initial investment in robotics can be hard to justify, the longer-term savings and flexibility offered by integrating autonomous technology into your existing workflow can be a gamechanger for manufacturers.

**Lower Labor Costs:** A reduction in human workers required for repetitive, dangerous or simple tasks, means your company's labor costs will be significantly reduced thanks to the investment in robots. You'll need to look at upskilling or investing in staff who can help keep things running effectively and understand and interpret data processed by robots, but this will inevitably mean you'll need less manpower in your manufacturing plant.

**Reduced Time and Material Waste:** Robots optimize workflows and reduce inefficiencies helping to reduce the amount of time required to create products. Along with this, their vastly improved accuracy vs humans ensures that material wastage is much lower. Pairing these two benefits reduces costs and improves your overall ROI.

## Enhanced Manufacturing Plant Safety

Manufacturing related injuries in the US came in at a staggering 326,400 in 2023, and while this is a 6% year on year drop, more needs to be done to protect the safety of our skilled workers. Robots are a great way to automate especially dangerous tasks in the manufacturing plant, helping our manufacturing workforce to keep fit and healthy.

**Handling Dangerous Tasks:** One of the core tasks that robots can take on is high-risk jobs, such as welding and handling hazardous chemicals – which can pose significant risks to the workforce when tasks are carried out by a human. By offloading tasks like this to robots, your manufacturing business can vastly reduce workplace injuries, whilst also benefiting from improved accuracy and reduced downtime.



**Taking on Physically Demanding Tasks:** Robots are also capable of taking on physically taxing tasks, which most employees will actively look to avoid carrying out, especially on an ongoing, long-term basis. Having autonomous robots on hand to carry out such tasks is a huge benefit, improving employee well-being and reducing the likelihood of employees being off sick with injuries sustained from physically demanding tasks.

### *Flexibility and Scalability*

There's an ever-increasing reliance on manufacturers being agile to new changes and customer demands, which can be particularly difficult with older workflows. Robots allow businesses to seamlessly retool for various tasks, giving manufacturers who have futureproofed the upper hand over competitors who have not.

**Reprogramming Speed:** Modern robots are capable of being reprogrammed or retooled for various tasks. This enables manufacturing businesses to be agile and

quickly adapt to any product changes, or the addition of new lines. There's an ever-increasing requirement that manufacturing firms remain agile to the needs of their customers, and robots' ability to quickly be reprogrammed into carrying out a totally different task can be a gamechanger for manufacturing firms of all sizes.

**Modular Integration:** A key selling point for robots is their ability to be seamlessly integrated into specific parts of a new or existing production line, scaling up as required. The ability to scale as much as needed is a big selling point for manufacturing businesses that are going through periods of growth, equally, the ability to scale back on robots if production slows down too is useful.

MANUFACTURING  
**BOLD**  
MARKETING SUCCESS

The graphic features a dark blue background with white technical drawings and lines. The text 'MANUFACTURING BOLD MARKETING SUCCESS' is prominently displayed in white, with 'BOLD' in a larger, bold font.

## 10+ Years of Results Driven Sales Leads and Acquisitions

We're defined by who we are. Hardworking. Experts in both traditional and digital worlds. Lovers of great creative. Our workboots are never clean. Let's push the bounds of manufacturing and keep the shop floor bustling with innovation.

**603.436.2065**



[BOLDWERKS.COM](http://BOLDWERKS.COM)



**BOLDWERKS**

871 Islington Street | Suite L5 | Portsmouth, NH 03801



## Data Collection and Analytics

Data collection and analytics are an exceptionally important part of modern manufacturing, as it gives manufacturing managers access to insights to improve performance, outputs and quality – which inevitably improves overall costs and profits.

**Real-Time Monitoring:** Monitoring the performance of your assembly line, or general production can give some extremely interesting and potentially operations-changing insights to manufacturing plant managers. With insights available on cycle times, downtime and errors, there's an added layer of data on hand to make informed decisions on.

**Predictive Maintenance:** Reducing downtime of machinery is essential to the smooth operation of manufacturing. With robots integrated into workflows, data is available on when machines are likely in need of servicing, along with insights on when a machine might be on the brink of breaking down or becoming inefficient. This allows manufacturing managers to make informed decisions on when to decommission machinery and ensure that there's no unplanned downtime in the plant.

### About the Author:

*Buddharatn Ratawal has been the Sr. Manager, Strategic Business Development for the DELMIA brand at Dassault Systèmes since 2022. He is responsible for developing new and innovative business markets and reinforcing the company position as an innovative leader in key industries.*

HAVE A STORY IDEA? LIKE WHAT YOU'RE READING?

*We would like to hear it. Contact us to give us your input or feedback.  
We're always looking for new stories to discuss.*

**chris@thegatewaymag.com or Call: (877) 463-4020**





**BAY STATE MACHINE**  
GRINDING & HONING

est. 1989

## GRINDING & HONING SPECIALIST

- ID-20" Swing
- OD-84" Long
- Surface Grinding 24"x60"
- CNC Cylindrical

**ID & OD GRINDING**  
**HONING**  
**SURFACE GRINDING**  
**CNC CYLINDRICAL**

Top Quality • Any Quantity • Pickup & Delivery • Same Day Quotes

Plainfield, CT tel: 860-230-0054 baystatemachine@hotmail.com

## Fast Hole, Wire and Sinker EDM Precision Tools, Dies, Jigs and Fixtures

# Border Tool and Die,

DBA Bengtson Tool and Die


240 Gale Street Canaan, VT 05903  
T: 802-266-9666 F: 802-266-9667  
richard.btd@gmail.com



## Spur & Worm Gears Internal / External Splines Broaching, Hobbing, Shaping



**JoVal Machine Company, Inc.**  
515 Main Street • Yalesville, CT 06492  
Tel (203) 284-0082 • jovalmachine.com



**MERRIMACK MANUFACTURING**

Contract and prototype manufacturing of precision screw machined parts for volume production

217 Harrison Rd. Bridgton, ME 04009      www.merrimackmfg.com      207-647-3566 info@merrimackmfg.com



**JCB**  
Performance Machine, LLC  
(603) 415-0110 Concord, NH

## PRECISION MULTI-AXIS MACHINING

Specializing in Mill/Turn Machining of Stainless Steel and Non-Ferrous metals:  
**316L • 304L • Nitronic 50/60**  
**17-4 H1150 • HH1150 • H900**



[www.jcbperformance.com](http://www.jcbperformance.com)

### GATEWAY CLASSIFIEDS

## SELLING YOUR BUSINESS?

We are an established precision manufacturing company with over 60 years of machining experience and we are seeking to expand our operations.

If you are ready to move on to your next act, and your business provides machining or special processes, we're interested in talking with you!

**Please email us at [dcremin@straton.com](mailto:dcremin@straton.com) or give us a call at 203-375-4488 ext. 104**

*"Of all the things I've lost, I miss my mind the most." – Ozzy Osbourne*

## Electric Boat and other Connecticut manufacturers have thousands of job openings. This is why it's hard to fill them.

Connecticut's manufacturing sector is facing a significant workforce shortage, with an estimated 8,000 job openings, and is relying on rigorous workforce-development programs to attract new hires, such as the machinist course at Grasso Technical High School.

### Key findings

1. The key findings of the study include the significant workforce shortage in Connecticut's manufacturing sector, with an estimated 8,000 job openings, and the challenges faced by manufacturers in recruiting and retaining skilled workers, including the misperceptions about trades such as machining and welding.
2. Key findings include a 33% decline in enrollment in CT State manufacturing programs from 2018-19, and a record total of nearly \$35 billion in manufacturing output in 2023, accounting for about 10% of the state's gross domestic product. Additionally, the Trump administration's revised tariff policies are expected to increase the cost of goods imported into Connecticut by at least \$3.16 billion.
3. An estimated 8,000 manufacturing jobs were open in the state, according to the 2024 Connecticut Manufacturing Report, which was produced by the Connecticut Business & Industry Association (CBIA) and affiliates CONNSTEP and ReadyCT.
4. In the ensuing nine years, about 4,000 people who have participated in MPI courses have been hired by Electric Boat and about 50 other companies that operate in eastern Connecticut.
5. The other new Electric Boat machinists who took the recent course at Grasso Tech included Ethan Green, a 26-year-old from Hopkinton, Rhode Island, who participates in robotics competitions in his free time.

### Objectives

The objectives of the study appear to be to understand the challenges faced by manufacturing workers in Connecticut, including financial struggles and the impact of tariffs and technological advances. Another objective is

to examine the potential for economic growth driven by manufacturing hiring.

### Methods

The methods used to address the workforce shortage in Connecticut's manufacturing sector include the implementation of workforce development programs such as the Manufacturing Pipeline Initiative, which provides training and education to new hires, and partnerships between manufacturers, educational institutions, and government agencies.

The methods used in the study include analyzing data on manufacturing output, employment, and enrollment in manufacturing programs. The study also involves gathering quotes and insights from industry experts and officials.

### Results

The results of the workforce development programs in Connecticut's manufacturing sector include the placement of about 4,000 people in jobs at Electric Boat and other companies through the Manufacturing Pipeline Initiative, and the provision of training and education to new hires such as Esmeralda Zurita and Ethan Green.

The results of the study show that manufacturing workers in Connecticut are struggling financially, despite better pay and benefits. The results also show a decline in enrollment in manufacturing programs, but a potential for economic growth driven by manufacturing hiring.

### Conclusions

The conclusions of the study include the need for continued investment in workforce development programs to address the shortage of skilled workers in Connecticut's manufacturing sector, and the importance of promoting the manufacturing sector as a viable career path to attract new hires.

The conclusions of the study suggest that manufacturing is a critical sector in Connecticut's economy, but it faces challenges such as a tight labor supply, tariffs, and technological advances. The study also concludes that investing in manufacturing hiring and training could drive economic growth.

*To read full article in depth details visit: [www.ctinsider.com](http://www.ctinsider.com)*



## GBMP Consulting Group's 21st Annual Northeast Lean Conference is Coming Soon – “Transforming Together: Paving a Unified Path to Excellence”

Manchester, NH – [8/18/2025] – The GBMP Consulting Group is excited to announce the 21st Annual Northeast Lean Conference, to be held October 27–28, 2025, at The DoubleTree by Hilton in Manchester, New Hampshire.

Under the theme “Transforming Together: Paving a Unified Path to Excellence,” this premier event welcomes 500 passionate Lean practitioners and business professionals committed to advancing continuous improvement through Lean Manufacturing and the Toyota Production System (TPS).

The conference offers a practical and immersive learning format, featuring:

- Inspiring keynotes, plenary sessions, and breakouts
- Interactive problem-solving discussions
- Benchmarking and robust networking opportunities

- A rich blend of educational content tailored to Lean practitioners at all experience levels

And featuring keynote presentations by:

- **Derek Volk** – Author & CEO, Volk Packaging, Biddeford ME “Go for Third: Everything I Know About Business I Learned from Coaching Girls’ Softball”
- **Miles Arnone** – CEO, Re:Build Manufacturing, Framingham MA “16 Principles to a Resilient & Innovative Culture”

This event stands out for its emphasis on collaboration—as attendees come together in an intimate, community-driven setting to share best practices, exchange innovative ideas, and forge meaningful connections.

*Registration is now. Visit <https://www.gbmp.org/ne-lean-conference> to view the complete agenda with session abstracts and speaker bios and register your team today! Groups save 15%!*

# Drive Lean Excellence in Manufacturing

Join 500+ manufacturing industry professionals at the  
**21<sup>ST</sup> ANNUAL NORTHEAST LEAN CONFERENCE**  
 October 27–28, 2025 in Manchester, NH

Engage in high-energy keynotes, immersive workshops, and hands-on Lean tools rooted in TPS. Gain insights, forge connections and ignite operational transformation.

transforming  
 together

Paving a Unified Path to Excellence



21<sup>ST</sup> ANNUAL NORTHEAST LEAN CONFERENCE

October 27–28, 2025  
 DoubleTree by Hilton  
 Manchester, NH

**REGISTER TODAY!**  
[gbmp.org/ne-lean-conference](https://www.gbmp.org/ne-lean-conference)



## Connecticut Manufacturer Raises Over \$7,500 for First Responders, Military Heroes

*PACT Presents \$7,624.47 Check to Tunnel to Towers Foundation*

Watertown, CT – August, 2025– Summer is typically a time when businesses slow down or go on furlough. Not so with Connecticut manufacturer Packaging And Crating Technologies, LLC (PACT), which recently completed its 3rd Annual Military Heroes Charity program and raised \$7,624.74 for the Tunnel to Towers (T2T) Foundation. The original fundraiser ran from May 1st through the 4th of July based on sales of its entire product line currently used by the military and moving industry. On Tuesday, August 5, 2025, the Watertown-based company presented a \$7,624.74 check to the national charity that directly benefits American military veterans and first responders, especially those involved with the 9/11 NYC tragedy, in a public ceremony at its company headquarters.

“It is always the ideal time to honor the sacrifice of American servicemen and women and first responders who have given us the gift of freedom,” said Rodger Mort, chief operating officer at PACT. “We have strong ties to the military both personally and professionally and are always happy to help such humble heroes in any way possible.”

The T2T Foundation provides mortgage-free homes for America’s catastrophically injured veterans and first responders, Gold Star and fallen first responder families. According to the Defense Casualty Analysis System, there were 844 total military deaths in 2022.

Tunnels to Towers Foundation was founded to recognize the valiant life of NYC firefighter Stephen Gerard Siller. Siller was assigned to Brooklyn’s Squad 1 and had just finished his shift when he got word over his scanner of a plane hitting the North Tower of the World Trade Center. He drove his truck to the entrance of the Brooklyn Battery Tunnel, but it had already been closed for security purposes. Determined to carry out his duty, he strapped 60 lbs. of gear to his back, and raced on foot through the tunnel to the Twin Towers, where he gave up his life while saving others. Stephen had everything to live for; a great wife, five wonderful children, a devoted extended family, and friends.

To date, the Foundation has provided over 600 mortgage-free homes for families, including specially-adapted smart homes for catastrophically injured veterans and first responders. Over 500,000 participants have supported the organization’s 80+ national walk, run and climb fundraisers.

“We are extremely grateful for the generous effort that PACT has made to our national non-profit organization for the third year in a row,” said Cahill Zoeller, director of development for national programs at Tunnel To Towers Foundation. “In an incredibly real way, each dollar donated helps take a huge financial burden off our many beneficiary families.”

*For more information about PACT and its line of products for the military, please visit: [www.pactww.com](http://www.pactww.com).*

GOT PRESS? GET THE WORD OUT.

***Make sure we’re on your press outlet hit list. Advertisers in the Gateway have access to promote news and events right here to YOUR target market.***

**[chris@thegatewaymag.com](mailto:chris@thegatewaymag.com) or [Submit at thegatewaymag.com](http://thegatewaymag.com)**

*“I fear no man, no beast, or evil, brother.” – Hulk Hogan*



FOLLOW US ON SOCIAL MEDIA:



# HIGH PERFORMANCE ALLOY SPECIALIST



**NICKEL  
COBALT  
STAINLESS STEEL  
ALUMINUM ALLOY  
ALUMINUM EXTRUSIONS**

**WATERJET CUTTING  
EDM CUTTING  
MILLING & TURNING  
SAWING  
SHEARING**



- Near Net Shape Cutting
- Laser Quality Inspection
- Finish Machining

11 Britton Drive Bloomfield, CT 06002  
Tel: 860-882-0019 or 800-214-0475  
Fax: 860-882-0967  
sales@aalloys.com www.aalloys.com



**ISO 9001:2000  
AS 9100B Certified  
P&W LCS APPROVED**



**We Armor Your Assets**

For Orders and Pricing:  
Contact MuShield for more information

**[ 888.669.3549 ]**

**MuShield®**



**Our Core Services**

- Magnetic Shielding
- mumetal
- Hydroforming
- Hydrogen Heat Treating

**Quality Capabilities**

- ISO 9001 : 2015 Certified
- AS9100D Certified
- ITAR Registered
- Magnetic Shield Testing



MuShield.com | mumetal.com | HydroformingManufacturing.com | CryoPermShielding.com



**Bodycote**

- Specialists in the thermal processing of components used in aerospace & defense industries
- Maintains major accreditations (ISO 9001:2000, AS 9100, Nadcap) and approvals from prime aerospace manufacturers and their supply chains



Call 860.225.7691 or visit [www.bodycote.com](http://www.bodycote.com) for more information

BERLIN Connecticut    SOUTH WINDSOR Connecticut    IPSWICH Massachusetts    WORCESTER Massachusetts    LACONIA New Hampshire    CINCINNATI Ohio

**Processes**

- Carburizing
- Electron beam welding
- Ferritic nitro carburizing
- Honeycomb brazing
- Induction treating
- Lindure®
- Nitriding
- Pit nitriding
- Vacuum heat treating & brazing

**Materials**

- Aluminum
- High temp alloys
- Tool steels



# Gateway TO Manufacturing



FOLLOW US ON SOCIAL MEDIA:



**Looking to have a feature done on your company?**

We would like to hear it. Visit our website and submit to us directly today.

[www.thegatewaymag.com](http://www.thegatewaymag.com)

*Need Help? Call: (877) 463-4020*

Issue No. 310

FREE SUBSCRIPTION