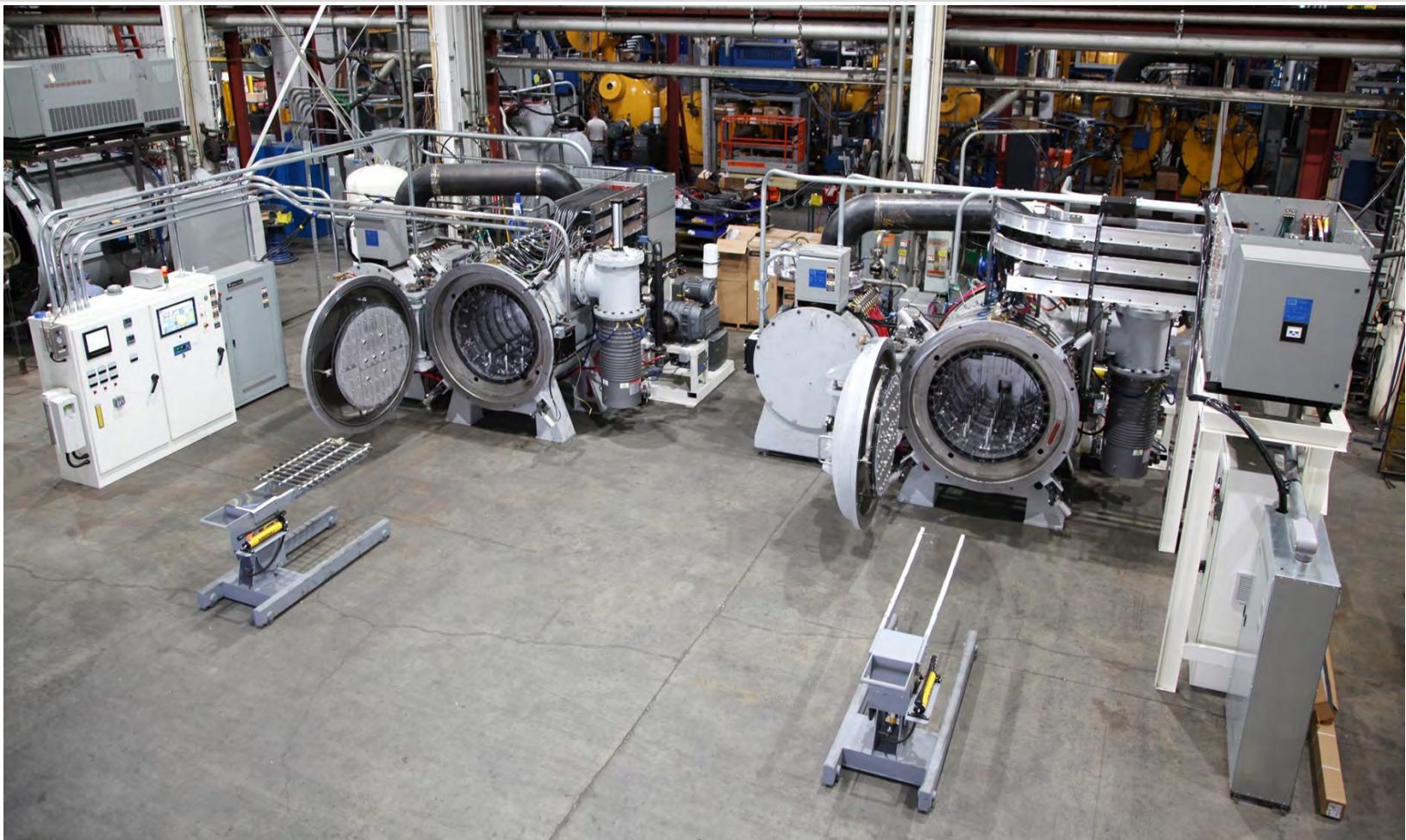
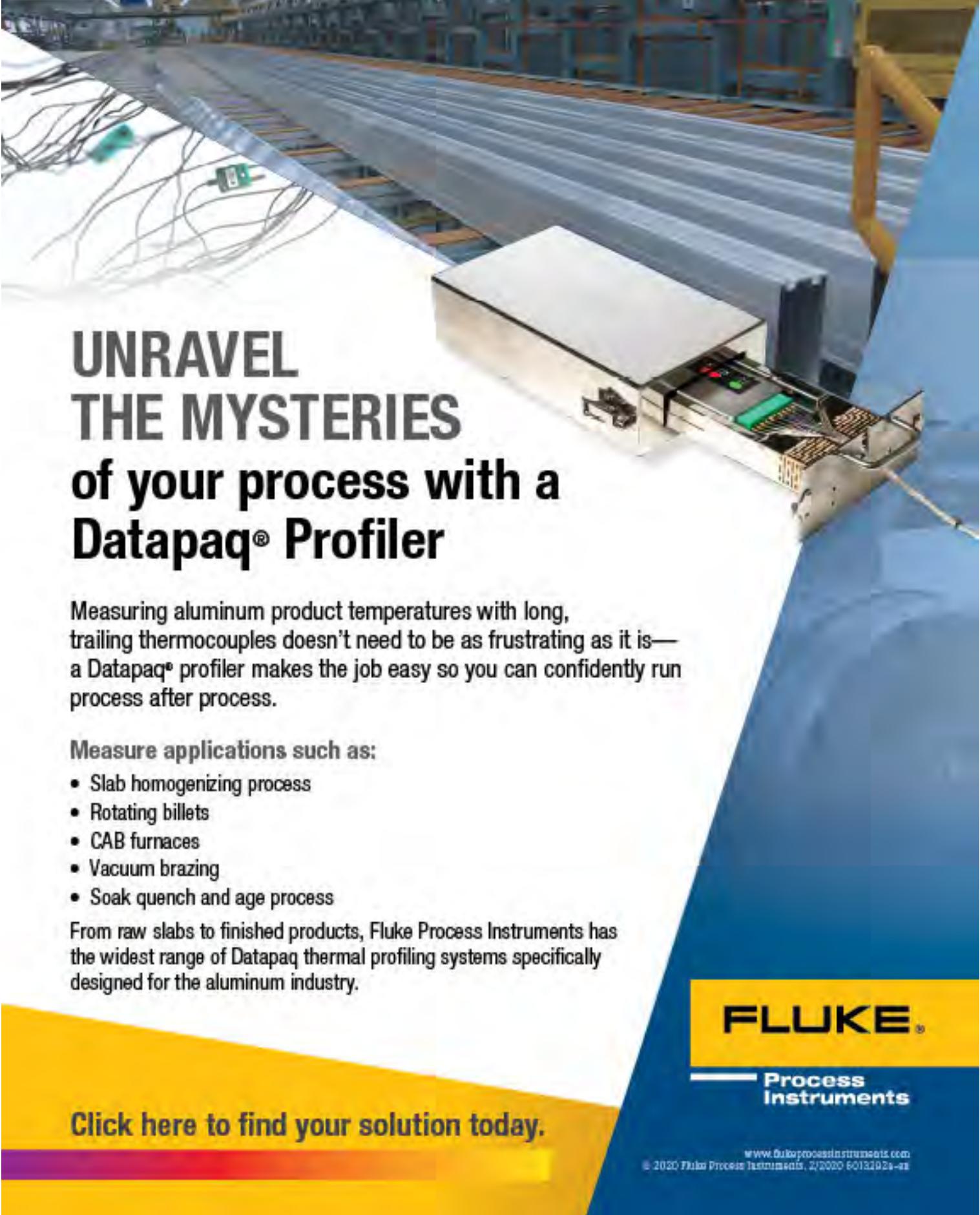


## HEAT TREAT NEWSLETTER

*Everything to do with heat treating*



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## **IN PARTING**

## INTRODUCTION

**So How Are We Doing These Days?** Well it would appear that the worldwide heat treatment industry in 2020 is fair to middling and certainly down from 2018 and 2019. Conversations with in-house heat treaters and commercial heat treaters in the largest heat treatment market in the world, the USA reveal that almost universally the feeling is that while business is not terrible it is certainly not great either. These feelings are supported by **Metal Treating Institute (MTI)** numbers which show that their members (*who represent many of the commercial heat treaters in North America*) see a slower economy these days. Figures range from “flat” sales in the Northeast to a sales drop of almost 20% in the North Central region of the country. However being a very optimistic bunch at “**The Monty**” we much prefer to look at the other side of the coin which shows that there are few if any layoffs in the industry, industry suppliers are still building and selling equipment and the general consensus is that this is a temporary slowdown. We happily concur.

This issue of “**The Monty**” as usual features the most up to date news and trends in the worldwide heat treatment industry along with one of the industry’s most comprehensive lists of surplus heat treating equipment.

As always, we look forward to your thoughts and comments.

Sincerely Gord, Jordan and Dale Montgomery

# HEAT TREAT NEWS

**The Website of Choice for Captive and Commercial Heat Treaters  
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## Fiat Chrysler Automobiles, Kokomo, Indiana, USA

Feb 28, 2020

It was recently announced that Fiat Chrysler Automobiles would be making an investment of nearly \$400 million USD into one of their 3 Kokomo, Indiana transmission plants. The announcement caught our eye as the Kokomo, Indiana plants collectively rank amongst the largest captive heat treats in the USA (we have a listing of the 10 largest captive heat treaters in North America at <https://themonty.com/project/10-largest-north-american-captive-heat-treaters/>). These plants would be part of FCA). A portion of the official announcement is further down but it gives no hint about whether heat treatment investments are involved. Now to give you an idea about the amount of heat treating at the Kokomo plants this was a list of their furnaces from a few years ago. While it has changed with some furnaces gone but with others such as ECM vacuum carburizing systems added it represents an enormous volume of heat treating with quite a cross section of equipment;

7-Three row Holcroft Pusher Furnaces

6-Lindberg 36 X 72 X36 Batch IQ furnaces

6-AFC 36 X 72 X 36 batch Austemper Furnaces

3-Holcroft single row pushers

2-Surface rotary furnaces

2-Seco Rotary Furnaces

30-tempering furnaces.

*“January 2020; KOKOMO – Governor Eric Holcomb has announced a significant*



*investment by a European automaker in its Howard County manufacturing operations. The Indiana Economic Development Corp. says Fiat Chrysler Automobiles plans to invest nearly \$400 million to expand and retool Plant II of its*

*Kokomo transmission plants for the production of a new engine. The new production is expected to require a workforce more than 1,000, which will include a combination of current FCA employees and new hires. The investment was confirmed Tuesday during*

*the governor's State of the State address. The IEDC says the effort will support the assembly of the GMET4 engine, marking the first time FCA has built an engine in Indiana. "Our Indiana operations have historically been known as the largest transmission installation in the world," Brad Clark, vice president and head of engine and transmission manufacturing for FCA North America, said in a news release. "With this potential investment, FCA has the opportunity to diversify our presence in the region. We look forward to working with the state and city of Kokomo to finalize our investment plans."*

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## HK 2020

Feb 28, 2020

The largest heat treating exhibition in Europe in 2020 will be the HK 2020 event to be held October 20-22 in Cologne, Germany. We at "**The Monty**" have been attending this event for years and in our humble opinion no other heat treatment exhibition in Europe matches this one. The exhibitors are largely European and Asian with only a smattering of North American suppliers however all of the seminars are held in both German and English. The banner ad on the right hand side of this page will give you all the details. In the meantime we leave you with photos of the ALD and SECO/WARWICK booths from the October 2019 event.



## HK 2020

Werkstoffe – Prozesse – Produkte  
Materials – Processes – Products



## **HK 2020-The new HK!**

October 20-22 of this year sees the “New” HK 2020 in Cologne Germany. This is the largest and best attended heat treating event in Europe this year and in our opinion it is very worthwhile attending. If you scroll down to the end of this summary you will find a testimonial about the event from our friend, Mr. Harald Berger, Marketing, Communications Team, Aichelin Group.

*“So far the HK is the largest meeting of the materials technology industry in Europe, with a special focus of the congress on heat treatment topics. This year, the AWT is giving the event a new, fresh profile: the scientific congress will be expanded thematically and invited expert lectures on contemporary materials science trends will be presented. Additionally, also a conference with a special focus on industrial practice in the hardening shop will be established.*

*We kindly ask you to register for presentations, of course also on the "classic" topics of the congress such as heat treatment processes and plant engineering, by 15 March 2020 at <https://www.hk-awt.de/vortragesanmeldungen/>.*

*If you would like to submit a presentation for the practitioners' conference, please make a corresponding note on your abstract.*

### **Additional news on HK 2020:**

- *The congress is moving to the end of the exhibition hall. This also results in a different visitor guidance through the exhibition.*
- *Tuesday, 20 October, first day of the exhibition, "Bonus Day Exhibition", opening hours: 13.00 to 18.00. Admission to the exhibition is free! The "Bonus Day Trade Fair" enables both arrival and departure as well as a free visit to the trade fair on the same day.*
- *Two-day compact congress event on Wednesday and Thursday, 21/22 October. The scientific part will be simultaneously interpreted (German/English vice versa). The practitioners' conference HK will be held in German language.*
- *Meeting of the AWT community on Tuesday afternoon at the AWT booth at 16.00, followed by the AWT general meeting at 17.00.*

- New "all-round carefree package" with the complete stand "HK-Premium" comprising stand construction, furnishing, cleaning, W-LAN; parking tickets and admission tickets

*Don't miss the opportunity to find out more about the trends in research and practice, make new contacts and see the latest products at the trade exhibition!*

*For booking exhibition stands, please contact Mrs. Müller at +49 421 3972850, [contact@congressmanagement.info](mailto:contact@congressmanagement.info).*

*"The HK is still an important event for the Aichelin-Group and its subsidiaries. It offers manufacturers and operators a forum for the exchange of opinions and further training. Opportunity is given to scientists, engineers and technicians from the fields of heat treatment and materials technology to obtain information of a high level about the latest trends and to look into related disciplines as well. The new structure of the event brings the congress, practical presentations and trade fair even more closely together. Our customers visit the congress and take advantage of detailed discussion in the exhibition taking place next door." (Harald Berger, Marketing-Communication-Team, Aichelin Group)"*



# HK 2020

Werkstoffe – Prozesse – Produkte  
Materials – Processes – Products

## NTN Bearings Investing in Heat Treatment in Anderson, Indiana, USA

Feb 27, 2020

We actually mentioned this a few weeks back but this announcement adds a few more details. Bearing manufacturers rank amongst the largest in house heat treaters on the planet and their heat treating methods span pretty much every type of heat treating there is; pit furnaces, batch IQ's, vacuum carburizing, Induction-you name it and we have seen it. These three photos from bearing manufacturer SKF show 3 different methods, an Aichelin roller hearth furnace with salt quenching, a rotary hearth furnace with press quenching and pit furnaces with oil quenching.

*"Auto parts manufacturer [NTN Bearing Corp.](#) is planning a \$58 million expansion of its central Indiana driveshaft facility, local officials announced. The company, which established operations in Anderson, Indiana, in 2017, will add heat treatment at the plant and create another 140 new jobs. NTN Driveshaft, which produces parts for constant velocity joints for major automakers, originally invested more than \$84 million in the facility and planned for 300 jobs; the Anderson site is expected to house 500 workers by 2023, according to the [Anderson Herald Bulletin](#). "We are pleased that NTN and the city were able to come to an agreement that will allow this important company to continue to expand and remain part of our community," Anderson Mayor Thomas Broderick said in a statement. City officials said the deal included a 75% property tax abatement for years, down from a 10-year, 100% abatement for NTN agreed to in 2015. The city council is slated to vote on the new agreement next month. Broderick said the reduced abatement would result in another \$2 million in tax revenue over the life of the agreement, after which the city expects to take in some \$500,000 annually."*



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## Hubbard-Hall Promotions

Feb 27, 2020

Hubbard Hall a supplier of heat transfer and heat treat salts is pleased to announce these promotions. Their ad can be found on the right hand side of this page.

***"Hubbard-Hall Inc. Appoints Jeffrey Davis Senior Vice President of Business Development and Distribution"***

**Waterbury, Connecticut**—Hubbard-Hall Inc., the oldest independent chemical distributor in the U.S., announced the promotion of Jeffrey Davis to Senior Vice President of Business Development and Distribution effective January 1, 2020. In his new role, Davis will direct the business development and sales efforts in the Northeast, overseeing a territory from Maine to Maryland, and west to Pennsylvania.

Davis joined Hubbard-Hall in 1983 as a sales trainee, and has held multiple leadership positions over his career, becoming an Officer of the company in 1999. “With over 30 years of experience at Hubbard-Hall, Jeff is uniquely suited to lead an experienced sales team and drive innovation that provides greater value to our Northeast customers,” said Molly Kellogg, President/CEO of Hubbard-Hall. Davis will also head up the company’s strategic initiative for solvent cleaning in critical applications. Davis earned his MBA from the University of Rhode Island and is a Board Member of the Commercial Executives for Motor Equipment Reman Association (MERA) and a member of the Chemical Club of New England.”



**“Hubbard-Hall Inc. Appoints Carter Burningham to Director of Supply Chain Waterbury, Connecticut**—Hubbard-Hall Inc., the oldest independent chemical distributor in the U.S., announced the promotion of Carter Burningham to the newly created position of Director of Supply Chain. Burningham joined the company in 2019 as a Director of Procurement. His new role reflects the additional responsibility for customer excellence in addition to managing purchasing, vendor relations and logistics. He will continue to report to Gerry Mastropietro, Executive Vice President/COO of Hubbard-Hall. Burningham’s prior experience working as a Procurement Manager at Henkel and Sun Products provided him with deep experience in creating sourcing strategies and managing cross functional teams.

“We decided to streamline the supply chain and include customer service under Carter’s leadership in an effort to focus on the whole customer experience,” says Molly Kellogg, President/CEO of Hubbard-Hall. Burningham believes that our long-term strategy is leveraging digital tools to help us to understand customer needs, internal processes, and improve customer and employee engagement. Burningham earned his BA in Finance from the University of Utah, and his MBA from Westminster College with an emphasis in Supply Chain.”





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## **Advanced Heat Treat Corp. Adds Another Heat Treatment to its Nadcap® Accreditation**

Feb 26, 2020

We would have to call Advanced Heat Treat Corp., “The King of Plasma Nitriding in the US” based upon how much of it they do. To see who the company stacks up in size compared to other commercials in the US we would suggest this link <https://themonty.com/project/largest-north-american-commercial-heat-treats-august-2019/> “**The Monty**” is the only news outlet in North America to rank commercial heat treaters by size and we have been doing this for 20 years.

*“WATERLOO, IA – February 25, 2020 – Advanced Heat Treat Corp. (AHT), a recognized leader in heat treat services and metallurgical solutions, announced that it has added gas nitriding to its Nadcap® accreditation. Advanced Heat Treat Corp. has held Nadcap® accreditation for ion nitriding since 2013. President Mikel Woods commented, “We are very excited to add gas nitriding to our growing list of Nadcap® accreditations. Our Nadcap® Merit Status in both ion and now gas nitriding displays our ongoing dedication to quality and growth within the aerospace market.” Having demonstrated their ongoing commitment to quality by satisfying customer requirements and industry specifications, the Nadcap® Task Group determined that Advanced Heat Treat Corp. has earned special recognition. This means that, instead of having their next Nadcap® audit in twelve months, Advanced Heat Treat Corp. has been granted an accreditation that lasts until April 30, 2022. “Nadcap® accreditation is universally acknowledged as a significant undertaking. Validating compliance to industry standards, best practices and customer requirements, Nadcap® has long been incorporated by the aerospace industry into their risk mitigation activity. Some companies, such as Advanced Heat Treat Corp., go even further achieving Nadcap® accreditation to obtain Merit status and they should be proud of it,” commented Michael J. Hayward, Executive Vice President and Chief Operating Officer at the Performance Review Institute®. The Nadcap® Heat Treating accreditation was achieved at its MidPort Blvd. location in Waterloo, Iowa. The company also has locations in Cullman, Alabama; Monroe, Michigan; and another location on Burton Ave. in Waterloo, Iowa.”*





## Buehler 2020 Webinar Series Starts in March with Hardness Testing on Surface Hardened Parts

Feb 26, 2020

*Buehler, an ITW Company and a global industrial manufacturer metallographic equipment and the Wilson hardness tester line announces the 2020 Hardness Webinar Series. The first webinar in the series will be conducted in English, German and French and offered*



*on several dates, and time zones throughout March 2020. The webinar will explore hardness test applications on surface hardened parts with Vickers and Rockwell testing.*

*The webinar is presented for metallurgical technicians, engineers and others who carry out hardness testing of materials as part of quality control or inspection during production of aerospace, automotive or other surface hardened parts.*

*The webinar will include a review of these hardness testing applications:*

- Specimen preparation for micro-hardness tests
- Case study of surface hardened parts
- Evaluate hardness mapping of surface hardened parts
- Hardness Traverse Testing with:
  - Carburized Hardening Depth (CHD) parts
  - CHD Relative for Induction Hardened parts
  - Nitride/Plasma Hardened parts.

*Registration is complimentary, sign up today and get a place in the virtual Buehler classroom. Attendees will also receive a certificate of participation right after the Webinar. If the Webinar is interesting to you but the date does not fit your schedule, simply register*

and you will get a recording shortly after the event. To register for the complimentary webinar click [here](#).

---

## Why Do Captives Choose Vacuum Technology?

Feb 25, 2020

A manufacturer in the US approached us today with what will soon be a surplus vacuum carburizing system. To be exact it is an older 3 cell ECM system which one of these days will not longer be needed due to a change in direction when it comes to their heat treating requirements. Looking at these photos of the installed furnace system our first thought was that this is one reason why vacuum technology can be very attractive to a manufacturer with heat treating requirements-no heat, no smoke, no flames. As can so plainly be seen in these pictures the heat treat department is located right smack in the middle of the plant and surrounded by machining centers, assembly operations and even warehousing. Quite frankly we consider “real” heating treating to involve flames, puddles of quench oil and smoke however even we have to admit that this is not always a good thing.



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## Solar Atmospheres Commissions Scanning Electron Microscope (SEM)

Feb 25, 2020

**“February 24, 2020 – To meet the challenges of the metal treating industry, Solar Atmospheres recently purchased and commissioned a Hitachi smart Scanning Electron Microscope. The FlexSEM1000 II will allow Solar to meet customer needs, such as strict requirements for low level contamination from carbon, oxygen, and/or nitrogen, post heat treating. Additionally, the SEM will enable Solar to fulfill materials characterization and microstructural determination requests beyond the basic metallography and hardness testing. This investment is a response to the changing needs of Solar’s customers, and is in keeping with the company’s mission of looking forward in the area of technical capabilities while demonstrating a willingness to accept a challenge.**

*“This addition is a game changer” states Solar’s VP of Technology, Don Jordan. “We have made significant investments in our technical capabilities over the years, and this was a natural addition to our core competencies.” The SEM unit includes an energy dispersive X-ray Spectroscopy (EDS) option in order to characterize the elemental composition of the sample under investigation. “SEM technology has come a long way recently,” Jordan continues. “Today’s SEM technology means you don’t need to be a PhD to run the machine. The human interface is user-friendly, meaning quick and accurate metallurgical photos and spectroscopy can be achieved.”*



## Monday Morning Briefing

Feb 23, 2020

### Abbot Furnace Receives Order for Calcine Furnace Scheduled for Delivery Q2

**2020; St. Mary's, PA:** Abbott Furnace Company is proud to announce that a



multinational corporation that specializes in producing chemicals and precious metals and operating in more than 30 countries worldwide has placed an order with Abbott Furnace Company for an electrically heated continuous belt calcine furnace to be delivered in the 2<sup>nd</sup> quarter of 2020.

Abbott Furnace will design, manufacture and install the industrial furnace that is rated at 1,850° F and includes an 18" wide inconel belt, silicon carbide muffle and data acquisition system. **About Abbott Furnace;** Abbott Furnace is an industrial furnace manufacturer with 35 years of experience designing and producing some of the industry's most reliable and high performing industrial continuous process furnaces. Abbott is a leading producer of industrial sintering furnaces, annealing furnaces, tempering furnaces, brazing furnaces, heat treat furnaces, steam treat furnaces, industrial ovens, CAB furnaces, High-Temperature Furnaces and other specialty furnace products. Abbott Furnace is a privately owned company located in St. Marys, Pennsylvania. Abbott furnaces are proudly manufactured in the USA.

We have this press release from **TAV**, an Italian manufacturer of vacuum furnaces. Generally in North America you only run across them in the US South East where they are becoming better known; "TAV Vacuum Furnaces supplied a vacuum furnace with rapid cooling in inert gas at high pressure to a company in the aviation industry. The furnace, which has useful dimensions of 400 mm (15.7 inches) wide x 400 mm (15.7 inches) high x 600 mm (23.6 inches) long and a maximum operating temperature of 2282°F (1250°C), is suited for hardening and annealing. An inert-gas circulation system combines high flow, high pressure and multidirectional flow distribution to ensure rapid and uniform cooling of the charge. The AMS 2750E-compliant furnace includes a SCADA supervisory system." Speaking of TAV we have this photo from **Hauck Heat Treatment** in Letchworth, UK showing their new TAV vacuum furnace. This particular one is capable of 1500kg and has working dimensions of 1000 X 1000 X 1200 deep.



In the USA **Mark Roop** is going to be a busy man for a while. Mark is the owner of **Industrial Furnace Services** in the Chicago area which for years has been doing furnace rebuilds and installs. Mark recently landed a real nice job rebuilding and installing a number of batch IQ furnaces at a captive heat treat operation in the US Midwest. Furnace builder **Surface Combustion** recently received an order for a cast link belt furnace line from a chain manufacturer. Its not often you ever run across a new cast link belt line these days as most heat treaters have switched over to mesh belts-the only real exception to this is when the weight of the parts is too much for a mesh belt.

From **IBC Coatings** in Lebanon, Indiana, USA we have a mention about some personnel changes which have occurred over the past few months. IBC does very high end coatings



and heat treating which includes 12 bar quenching vacuum furnaces, Ion Nitriding and vacuum carburizing; “**Lucas Emmert**, 16 years in the industry including work-holding for CNC machining and agricultural equipment. Formerly the engineering manager of Stace-Allen Chucks in Indianapolis, IN. Started as production manager at IBC Coatings November 2019. **Peter Harper**, BS in Biomedical Engineering, formerly an engineer at IBC for 9 years. Worked alongside his father Steve Harper, metallurgical engineer. Promoted to operations manager at IBC Coatings December 2019.”

**Stephen LaFrance** was recently named President of **Nelson Heat Treating** in Waterbury, CT., USA. Nelson Heat Treating Company Inc., has been around for a very impressive 65 years offers a number of heat treating processes including vacuum heat treating and austempering. In April all of the equipment at **Sakthi Automotive Group USA** in Detroit, Michigan will be auctioned off. This was a manufacturer of automotive steering arms and knuckles which was built in 2015 for a cost of \$75 million USD. Included in the auction are a number of **Chang Jiang Heat Treat Furnaces**. Chang Jiang is a new one on us, we have never run across them before.

Upcoming Stuff. Looking down the road we have a number of interesting things to tell you about. Next week (March 3-5 to be exact) is the ASM “**Heat Treat Mexico**” in Queretaro, Mexico (a banner ad about the event can be found on the righthand side of this page). “**The Monty**” will be visiting the show and also taking the opportunity to visit and profile several captive and commercial heat treaters in the area. March sees us visiting 1 or 2 heat treats in **Portugal** and later on this year we will be profiling captive and commercial heat treaters in the **UK** and **Germany**. When it comes to interviews we have a number coming up, **Pat McKenna** of **Ipsen** will be featured in March, followed

by **ALD** in April, **AFC-Holcroft** in May-when we look at it pretty well every single month in 2020 will see us profiling a different company and individual. Keep in mind that most of our past interviews can be found at <https://themonty.com/articles-interviews/> the most complete list of interviews in the entire heat treating industry by the way. Along the same lines back issues of our monthly newsletter "**The Monty**" can be accessed on the same page. While "**The Monty**" has been published since the 1990's our archives only go back to the beginning of 2017.



And to round things out for today we have this photo from Germany which we took back in October of 2016. In it we see on the left **Mr. Jorg Schmul**, owner of **Hagen Heat Treatment** in Hagen, Germany along with **Mr. Harald Roth** of furnace builder **KGO** of Germany.

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**GRAPHITE** G MATERIALS

This is a black and white advertisement for Graphite Materials GmbH. The top half features a large industrial furnace with a complex internal structure. The text "System-Solutions for High-Temperature Applications" is displayed in a large, bold, blue font above the words "Design | Engineering | Production | Hot Zone Relining". Below the furnace, contact information is provided: "Graphite Materials GmbH | Phone.: +49 911 999 01 03-0", "Rothenburger Str. 76, 90522 Oberasbach, Germany", "info@graphite-materials.com | www.graphite-materials.com". At the bottom, there is a social media section with icons for Facebook, Google+, Twitter, and YouTube, followed by the text "Let's keep in touch:". The bottom right corner features the company logo with the word "GRAPHITE" and a stylized "G" icon.

## Metcor Embarks on Major Expansion

Feb 21, 2020

Right in our own backyard, (Quebec, Canada to be exact) we see that commercial heat treater Metcor has invested over \$2 million into their St. Eustache facility. We will have more details and photos next week but for today we will share with you this press release from furnace builder Pyradia who provided some of the equipment. As a bonus we also have this photo of Metcor showing the owners in their aluminum heat treating department. *"METCOR, a leading provider of heat-treating services, has reaffirmed their trust in Pyradia with the purchase of a ninth furnace. An agreement was concluded for a Pit Furnace, as part of a major expansion. Pyradia's mission is to exceed our customers' expectations and become their reference in terms of satisfaction. So, for us, there's no better indication of success, than a long-standing customer, entrusting us, time and time again, with their extensive projects. We are always grateful for the support our customers demonstrate."*



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## ECM Technologies Welcomes Bill Gornicki as Director of Sales at ECM USA, Inc.

Feb 20, 2020

*"Pleasant Prairie, WI – February 19, 2020 – ECM Technologies is pleased to announce the appointment of Bill Gornicki as Director of Sales at ECM USA, Inc. in Pleasant Prairie, WI. Previously of Diablo Furnaces, ALD Vacuum Systems and Ipsen, Bill joins the ECM USA team with 30 years of heat treat industry experience. Bill's experience and focus in low pressure vacuum carburizing will further company equipment sales with project forecasting, development and management, and bring a dynamic twist in market analysis, technical papers and advertising for the USA and Canada markets. "We are very excited to have Bill join the ECM Group! His experience, knowledge and heat treat industry background will be a valuable asset to our team," states Dennis Beauchesne, ECM USA General Manager.*

*Bill is an accomplished sales professional with extensive knowledge in the LPC market. Bill was previously on the Board of Directors with AGMA (American Gear Manufacturers Association), was a member of the Board of Directors for CHTE (Center for Heat Treat*

*Excellence at Worcester Polytech) and is a member of ASM (Advanced Society of Materials).*

*ECM Technologies is an innovative low pressure vacuum furnace manufacturer with headquarters in Grenoble, France. With subsidiaries and ventures around the world, ECM's global presence is well known in the automotive, aerospace, nuclear, energy, electronic, induction and 3D additive industries. With such a versatile product line, ECM's products are ideal for heat treatment processes ranging from rapid thermal processing (RTP) with the JIPELEC™ JetFirst furnace to low pressure vacuum carburizing (LPC) with the ICBP® 1299 DUO (dual chamber vacuum furnace).*

*For more information, visit us online at [www.ecm-usa.com](http://www.ecm-usa.com) or [www.ecm-furnaces.com](http://www.ecm-furnaces.com) Bill can be reached at 262 914-6397 [bgornicki@ecm-usa.com](mailto:bgornicki@ecm-usa.com)*



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## Aerojet Rocketdyne Vacuum Furnace Sold

Feb 19, 2020

For some time we have had listed a very unusual item, a monster Abar Ipsen vacuum furnace with 6 bar quenching and a "rotator" design. It was located at an Aerojet Rocketdyne facility in California which closed down some time ago. Well we mention it today because it was sold just last week. If you recall it found a buyer at auction for \$500,000 USD about 2 months back, but that buyer was turned down as they were located outside of the US and the vendor had put restrictions on export. Here is the brief description of the furnace. *"Item#VF362 Abar Ipsen Model HR-120x152VC Vacuum Furnace; This vacuum furnace manufactured by Abar Ipsen in 2002 has a Hydrogen Purge, Graphite Hot Zone, Controlled Cooling and a "Rotator System". Working Dimensions of 120" D x 120" L (Rotator); 84" W x 84" H x 152" L (Hearth). Maximum load and temperature; 5000-Lbs @ 2400°F (w/ Hearth); 2500-Lbs @ 2200°F (w/ Rotator). 6 Bar positive pressure cooling.*



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## BMI To Install 2 Vacuum Temper Furnaces

Feb 19, 2020

Furnace builder BMI currently has under construction 2 large vertical vacuum temper furnaces at their facility near Lyon, France. The first is a model VSE86T with a weight capacity of 2,000Kg and with gas addition. The second a model V6TH200 (as seen in the foreground of this photo) has a weight capacity of 1500 Kg and features oil quenching. Both are destined for aerospace customers, one in France and one in China.



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## Emitec Auction, Fountain Inn, SC, USA

Feb 19, 2020

As part of our Monday Morning Briefing we had a mention about an auction at a company by the name of “Emitec” in South Carolina which featured an Elino mesh belt furnace and a Rohde chamber furnace (if you have an interest in these items scroll down to February 17<sup>th</sup> on this page). We've learned a bit more about the history of this plant since then and it can be found below. Interestingly enough while the original name of the company was Emitec, more recently it was known as Continental. While this was a fairly small facility it had a reasonably large heat treat as it also included 3 vacuum furnaces which are now on their way back to the parent company in Germany.

*“Continental Automotive is closing its Fountain Inn facility, citing an inability to compete due to increased pressure related to international tariffs levied at the federal level. The Nelson Drive facility, which employs 40 people, is set to close in December. All 40 are expected to be left without jobs with Continental. As part of a release, company leaders stated that the “consolidation of manufacturing operations to other international locations will improve their manufacturing performance, maximize utilization of equipment and resources while still being able to support the U.S. market with cost-competitive products.” Jonathan Coleman, executive director of the Laurens County Development Commission, said wheels are already in motion to help displaced workers at Continental find new positions. “We have meetings set up with them over the next two weeks,” Coleman said. “We’re going to work to get those 40 people placed in other opportunities as quickly as possible.” Continental Automotive arrived in Laurens County as Emitec in 1996. It supplies the metal substrate market for exhaust gas catalysts and metallic diesel particulate filters for vehicles and mobile machinery. In September of 2014, then Emitec made a \$3 million investment in the Laurens County facility and added 20 jobs.”*

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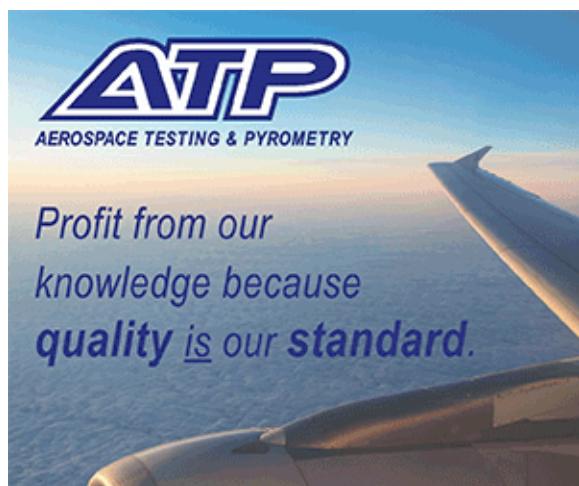
## Solar Manufacturing Ships Two All-Metal Hot Zone Furnaces

Feb 18, 2020

**"Sellersville, PA, February 17, 2020 – Solar Manufacturing recently built and shipped two furnaces to Tennessee, for service to the Medical and Additive Manufacturing industries. The Models HFL-3848-EQ and HFL-3836-EQ both feature metallic-insulated hot zones, a load weight capacity up to 2,000 lbs., and a maximum operating temperature of 2400° F. Measuring 24" wide x 24" high x 48" deep, and 24" wide x 24" high x 36" deep respectively, each furnace was designed with the SolarVac Polaris® Control System.**

*"Solar Manufacturing was awarded the order because we offered the best solution for their vacuum furnace needs," states Dan Insogna, Solar's Southeast Regional Sales Manager. "Our knowledge and experience of the additive manufacturing market set us apart from the competition. Additionally, the customer found the premium features and benefits offered with our vacuum furnace equipment impressive. We're pleased to have helped them select furnaces that best suit the unique requirements of the industries they serve."*

*Solar Manufacturing designs and manufactures a wide variety of vacuum furnaces, with process capabilities including: heat treating, sintering, stress relieving, vacuum temper, annealing, solution annealing, and ageing. We also offer replacement hot zones, spare parts, and professional service. To learn more about Solar Manufacturing contact Pete Reh, VP of Sales, at 267-384-5040 x1509, or via email [pete@solarmfg.com](mailto:pete@solarmfg.com) or visit us at [www.solarmfg.com](http://www.solarmfg.com).*



## Retech Moving to Buffalo

Feb 18, 2020

*"Retech, a SECO/WARWICK Group company, will lease about 49,000 sq. ft. (4,552 m<sup>2</sup>) of space at 683 Northland Ave. Mayor Byron W. Brown claimed in the official statement that RETECH's facility will bring state-of-the-art, high tech products to the Buffalo and Western New York area, and into the Northland Corridor Redevelopment Project. Earl Good, Retech Systems President and Managing Director, said, "Retech Systems is pleased to be moving to Buffalo. This decision was made not only to provide flawless regional and global support to our customers, we also thought about the future. The engineering and technology schools in Western New York are important incubators to support the technologies that we are creating. While we are changing our location, but the quality of our products will not be changing." Mr. Good predicts that RETECH's relocation will potentially create about 80 new jobs over the next few years.* Sławomir



*Woźniak, SECO/WARWICK's CEO, added: "Among other reasons, we decided to relocate RETECH headquarters to Buffalo due to the close proximity of other SECO/WARWICK Group subsidiaries in nearby Meadville PA. This decision will allow closer cooperation and improved operation management. The new location will also be a nice place to host customers and suppliers." Since 1963 RETECH has been the worldwide provider of cold hearth melting systems. The company's leading solutions are being employed predominantly by the medical and aerospace industries. RETECH is considered to be the pioneer of advanced melting technologies such as electron beam and cold hearth furnaces, and their equipment is being used for processes such as melting, casting and refining of titanium, reactive titanium alloys, super alloys and rare earth metals. RETECH has been a part of the European company, [SECO/WARWICK Group](#), since 2011."*

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## Monday Morning Briefing

Feb 17, 2020

**Selma Precision/Sona Precision Forge, Selma, NC.**— the end of the line. Now this is a plant which has made our news section several times over the years. Originally it went under the name of Sona Precision Forge and it was a supplier of automotive components with a reasonably large in house heat treat department-mainly batch IQ furnaces. Going back to 2012 the facility suffered a large fire which affected half the plant and part of the

heat treat department. The insurance claim totaled \$21 million USD which was used to rebuild the plant, rebuild equipment and update the entire heat treat department, all with a new name “Selma Precision”. In a second setback to this plant it was abruptly closed in 2015 with all of the equipment remaining installed and in place. In 2019 the facility was taken over by a large auto parts supplier and over a period of time most of the equipment including most of the heat treat department was sold off. All that remains now are two Allcase furnaces, one of which can be seen below (more details can be found at <https://themonty.com/project/surface-combustion-super-36-batch-iq-furnace/>)



McLaughlin Furnace Group Press Release; ***“McLaughlin Furnace Group of Avilla Indiana, USA is pleased to announce that they have just received an order for batch IQ furnaces from a major US heat treater. The order consists of 3 batch IQ furnaces with working dimensions of 36” X 48” X 36”, a charge car, a McLaughlin “Tru-Mix endothermic generator, tempers and washers. All of the equipment will be delivered installed and commissioned in 2020.”***

***Hauck, Dzierżoniów, Poland.*** It is now 5 months since Hauck Heat Treatment had a ground breaking ceremony for a 3000 square meter expansion of their plant in Dzierżoniów, Poland. Now comes the final stage-furnace installation. What you can see in the one photo below are two brand new straight through IQ furnaces along with companion equipment. These are triple chamber units with a maximum load capacity of 2 tons each. We can't be sure but our guess is the equipment is being provided by SECO/WARWICK but that is a guess on our part. The second picture shows the plant when we saw it a few years back.



March 18<sup>th</sup> there will be an auction in Fountain, Inn, SC featuring some heat treating furnaces. The equipment is located at ***Emitec, Inc.***, and the heat treat items include a 50" Wide Elino Electric Mesh Belt Conveyor Type Heat Treat Furnace (New 2014) and a Rohde Model KEU1950 Electric Chamber Furnace (New 2011). Both Elino and Rohde are based in Germany and are well respected



manufacturers, however they are virtually unknown in North America which leads us to believe that Emitec must be a German company.

**Bob Hill, Solar Atmospheres** Visits Washington, DC. “*Bob Hill, President of Solar Atmospheres of Western PA, attended the National Association of Manufacturers (NAM) Board of Directors Meeting in Washington, D.C. this week. Celebrating its 125th year, NAM boasted an outstanding lineup of speakers, including: Vice President Mike Pence (R); General “Fighting Joe” Dunford, Former Chairman of the Joint Chiefs of Staff; Senators Mark Warner (D-VA) and Shelly Moore Capito (R-WV); Governor Larry Hogan (R-MD); Betsy DeVos, US Secretary of Education; and Ivanka Trump, Advisor to the President. NAM clearly has the attention of lawmakers, both inside and outside the Beltway, and is an influential advocate for manufacturers in the US.”*



**Pat McKenna, Ipsen.** We look forward to posting a very interesting and in depth interview with Mr. Pat McKenna, CEO of Ipsen, USA, March 1 of this year. We would like to remind our readers that over the past almost 25 years “**The Monty**” had done more interviews with heat treaters and industry suppliers than any other source in the world- a number of these can be found at <https://themonty.com/interviews/> Speaking of Ipsen Janusz Kowalweski of Ipsen has been spending a great deal of time in Asia on behalf of the company. Apparently over the next 3 months Ipsen will be installing 10 new vacuum furnaces in different parts of South Korea and East Asia. This photo shows a very nice installation in Korea with an advanced HPQ furnace.



To round things our for today we are going to mention a very experienced “vacuum guy” who is looking for a new challenge. **Daniel Goosen** has 20 years experience with vacuum furnaces and for the past 10 years he has been Heat Treat Manager at **Bohler Uddeholm** in South Africa. Dannie is looking for a position in the US where his experience can be used. We met Dannie a few years back, he is on the left in the picture below. If

you would like to talk to him please drop us a line and we will put you in touch. There is not cost to this, we are trying to help an experience fellow heat treater.



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## Eric Dvorscak/Braddock Metallurgical

Feb 14, 2020

*"Braddock Metallurgical is proud to announce the addition of a new General Manager at our Boynton Beach, FL facility. Eric has many years of experience in heat treating, manufacturing, and management. We are excited to have Eric join our team. He will be an integral part in our ongoing pursuit to provide the best quality and service for our customers."* To this press release from Braddock Metallurgical we can also say that Braddock is the largest commercial heat treater in the US Southeast and is ranked as one of the largest in North American according to "The Monty" <https://themonty.com/largest-commercial-heat-treats/> Eric's background includes some time at Bodycote in Houston, Texas, USA and Regate Technologies in Plantersville, Texas a manufacturer who has an in house vacuum heat treating department.



custom-electric.com

An advertisement for Ipsen. At the top, the text "We're more than a manufacturer." is displayed in white on a red background. Below this, there is a photograph of two men in hard hats shaking hands in front of a large, partially constructed metal frame structure, possibly a warehouse or factory. In the bottom right corner of the ad, there is a small Ipsen logo.

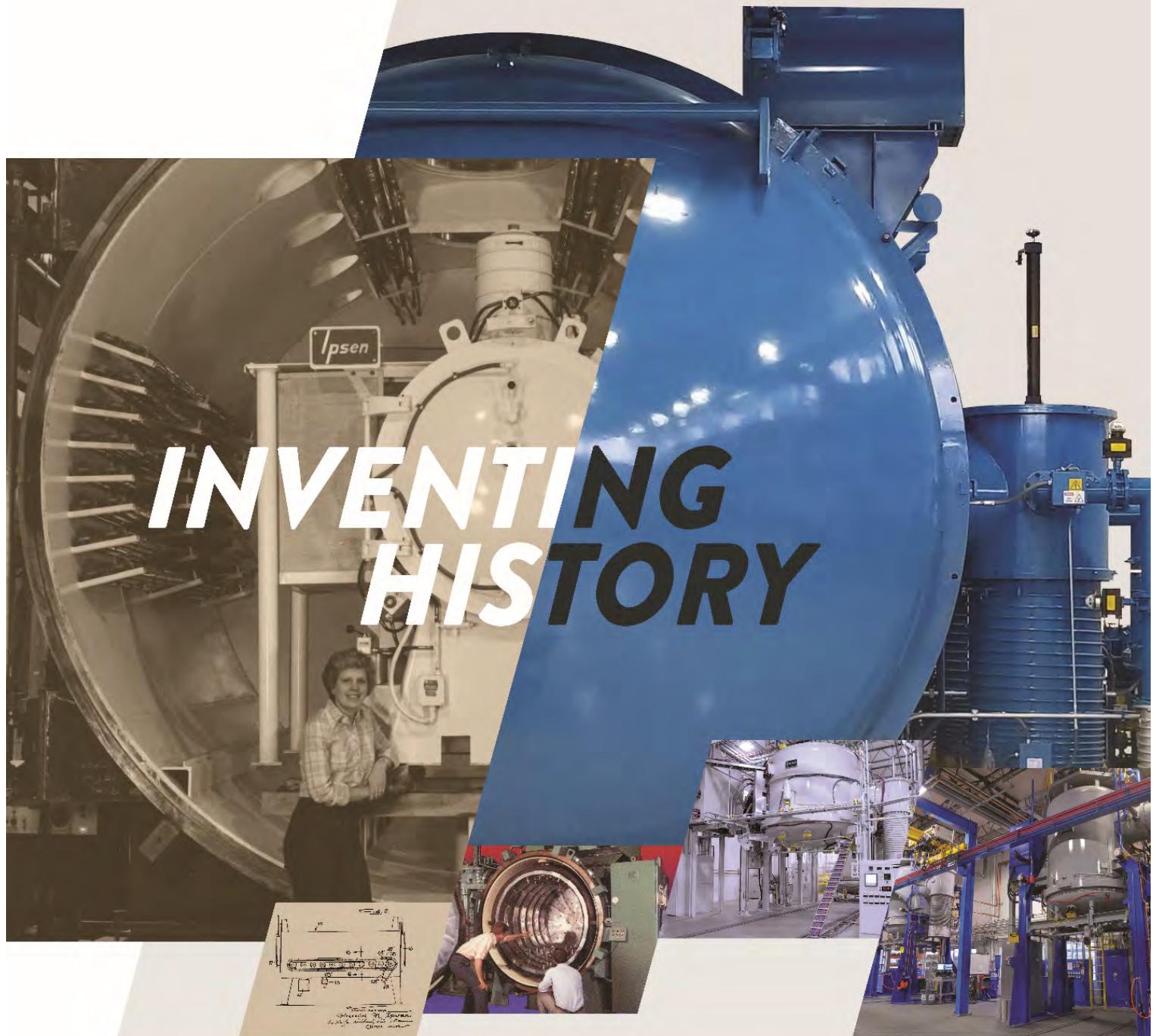
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[www.IpsenUSA.com](http://www.IpsenUSA.com)

## Coronavirus and The Heat Treating Industry

Feb 14, 2020

Yesterday we provided some thoughts on how the heat treating industry was being effected by the Coronavirus-this article provides a broader picture about how Asian manufacturing is coping or not coping.

*“As the world continues to grapple with the coronavirus outbreak, its impact can also be felt by automotive and aerospace manufacturers. Auto parts manufacturers across China such as Nissan, Honda Motor and PSA Peugeot Citroen, have suspended operations to keep their workers at home in order to minimise spread of the virus. Wuhan, the capital of Hubei and the epicentre of the disease is one of the major auto-industry hubs in China—home to seven major domestic and foreign auto manufacturers, as well as hundreds of auto parts suppliers. According to China Passenger Car Association, the province produced 2.2 million auto units in 2019 which accounted to nine percent of the country’s total production. “Carmakers will face severe parts-supply issues, something companies didn’t encounter during the SARS period,” said Cui Dongshu, secretary general of China’s Passenger Car Association. “Wuhan is the most cost competitive among China’s car-industry hubs, therefore many parts makers produce components there and supply their clients around the world.”*

*Automakers are expected to lose 350,000 units or about seven percent in the first quarter of the year if plants in 11 provinces responsible for two-thirds of*



*China’s vehicle production are down until February 10, according to automotive research firm IHS Markit. Most recently, Hyundai*

*has halted one of its assembly lines in its South Korea factory due to the lack of auto parts from China as a result of the outbreak. The company also plans to gradually suspend production in its factories due to the supply chain disruptions—the first global automaker to do so outside of China. Similarly, aerospace manufacturers are also affected by this crisis. Airbus has shut down an assembly line in China which is responsible for 10 percent of production for its most popular jet. The company said that domestic and international travel restrictions were posing logistical challenges for operations of its factory.*

*In a statement, Airbus said that they are “constantly evaluating the situation and monitoring any potential knock on effects to production and deliveries and will try to mitigate via alternative plans where necessary.” With major supply chain disruptions in the manufacturing sectors caused by the outbreak, IHS forecasts a loss of more than 1.7 million units for the first quarter if automotive plants remain closed until mid-March. Given*

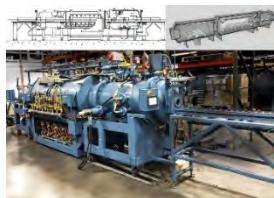
*the unpredictable nature of the virus, manufacturers will have to remain vigilant and monitor the global situation closely.”*

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## **Gasbarre Thermal Processing Systems Installs Continuous Vacuum Furnace**

Feb 13, 2020

*“Gasbarre Thermal Processing Systems is pleased to announce the recent installation of a Continuous Vacuum Furnace (model CVPQ) with 5 BAR pressure quench capabilities in Midwestern USA. The 5 zone furnace is rated to 2400F. The independent load and quench modules allow the heat module to hold temperature and vacuum creating an*



*extremely pure environment. Workloads are indexed through the furnace as quickly as every 6 minutes. As only the workload is cooled (not the heat chamber), it makes for a very efficient system. A pair of internal vacuum/pressure doors that seal against corresponding internal machined flanges means that no complex clamping mechanisms are required. Quick transference from the heat module to the cool module and fast quench capabilities (up to 5 BAR) make this an ideal furnace to sinter-harden SS parts. For more information on how Gasbarre Thermal Processing Systems can manufacture custom-engineered heat treating equipment solutions for your specific thermal heating requirements, contact Matt Marzullo at (401) 467-5200 or via email at [mmarzullo@gasbarre.com](mailto:mmarzullo@gasbarre.com). You can also visit our website at [www.gasbarre.com](http://www.gasbarre.com) and find us on LinkedIn (Gasbarre Products Inc.), Twitter (@gasproinc), and Facebook (Gasbarre Products Inc.).”*

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## Coronavirus-Is It Effecting the Heat Treating Industry?

Feb 13, 2020

For much of the world the coronavirus is little more than headlines in a newspaper but as the headlines grow closer and more persistent we are hearing more and more questions about possible effects on the heat treatment industry. As the virus is centered in China any possible effects for the rest of the world are going to be centered on those heat treating products and components which are exported from that country and heat treating imports to China from the rest of the world. While most of our information is anecdotal we can say with certainty that heat treat exhibitions in the country are being postponed - the first example is the 13th International Exhibition for Powder Metallurgy, Cemented Carbides and Advanced Ceramics organized by Uniris Exhibition Shanghai Co., Ltd, which had been scheduled for March 24-26th has now been postponed until further notice. Furnace start ups by Western suppliers are also being postponed due to travel restrictions involving field service engineers. We can say with certainty that 2 vacuum nitriders being built by European suppliers, 3 vacuum furnaces being built by European and North American builders and one mesh belt line being supplied by a North American company have all had their start ups delayed indefinitely.

The picture for heat treating products being exported from China is a little murkier due to the Chinese New Year. In 2020 this was celebrated from January 25th to February 8th during which time almost all companies were closed. As this coincided with the coronavirus outbreak it is impossible to say with certainty how much this has effected exports. However you can certainly say that since

this was extended by at least a week in many parts of the country it has slowed exports down by some degree. As it happens we at "The Monty" have a great deal of experience with molybdenum and alloy exports from China and to date we have seen very minor delays at most, delays mainly in quoting and engineering. This response from a Chinese supplier of moly seems to be typical; *"Mr. Gord, Yes, coronavirus is furious, but nearly one month passed, it becomes slowing down, plant plan to reopen tomorrow Feb 13th. The 4 orders from U.S. will be shipped continually within next month so we only little late."*

So at the end of the day until Chinese suppliers return from the extended Chinese New Year it is impossible to know for sure the effects on our industry. We will keep you posted.



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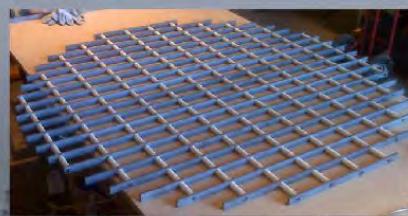
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## **Ipsen Customer Service Provides Free Furnace Evaluations**

Feb 13, 2020

*"Ipsen is committed to keeping its products running at peak performance for decades. With more than 10,000 furnaces installed worldwide, Ipsen maintains a strong focus on customer service and aftermarket support.*

*To better serve customers, Ipsen offers free evaluations of any brand of vacuum heat-treating system in the United States. During this comprehensive inspection, an Ipsen*



*Customer Service team member will check all major components of the furnace. The process typically takes under an hour, and Ipsen will provide a written health report with a suggested 18-month maintenance plan.*

*"Finding issues early, and planning for future maintenance, means less unexpected downtime and avoiding costly repairs," said Ipsen Customer Service Sales Manager Matt Clinite. "Thanks to proper maintenance and regular service, many Ipsen furnaces built in the 1960s and 70s are still running today."*

*In addition to the free evaluations, Ipsen's aftermarket services include replacement parts, hot zones, controls and instrumentation upgrades, mechanical retrofits and furnace refurbishments. With a global team of more than 120 field service technicians, Ipsen offers quick and easy access to troubleshooting and repairs, preventative maintenance, instrument calibrations and temperature uniformity surveys.*

*For more information on Ipsen Customer Service, or to schedule your free furnace evaluation, visit [www.ipsenusa.com/ipsen-customer-service](http://www.ipsenusa.com/ipsen-customer-service) or call 1-844-Go-Ipsen."*

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## **Heat Treatment Services to Open ALD Thermal Treatment (Suzhou) Co.**

Feb 12, 2020

To add to this rather interesting news item we can say with pride that we at "**The Monty**" have visited the three existing ALD facilities in Germany, Mexico and the US and all are top notch, very modern operations.

*"Heat Treatment Services (HTS), a division of ALD Vacuum Technologies GmbH headquartered in Hanau, Germany, has announced that it will establish a new heat treatment services centre in China, which will be officially registered as ALD Thermal Treatment (Suzhou) Co., Ltd. This will be the fourth ALD Heat Treatment Services plant globally, with the others being based in Germany, the USA, and Mexico. The company states that the new centre will be equipped with ModulTherm, ALD's heat treatment system, and will serve the domestic industry with high-quality heat treatment services. The new production hall will reportedly be erected next to the company's subsidiary ALD-C&K Vacuum Technologies (Suzhou) Co., Ltd. ALD-C&K Vacuum Technologies (Suzhou) Co., Ltd., produces, sells and services ALD equipment, and is also experienced in the commissioning and maintenance of heat treatment systems. The close cooperation between these two units is expected to contribute to the performance of the new heat treatment services centre. Start of production is scheduled for Autumn 2020."*



*Caption under photo: "The new heat treatment services production hall (left) will be erected next to the existing buildings of ALD-C&K Vacuum Technologies (Suzhou) Co., Ltd. (centre and right) (Rendering courtesy ALD Vacuum Technologies GmbH)"*

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## ION NITRIDING SOLUTIONS



### ODG Auction-What's it Worth?

Feb 12, 2020

Now here is a rather convoluted but interesting story about the travels of a Surface Combustion Batch IQ furnace. A number of years ago Surface (a furnace builder in Ohio) built and sold a small electrically heated batch IQ furnace with working dimensions of 24" X 36" X 24" to Timken Aerospace in Lebanon, New Hampshire, USA. The furnace worked well for a number of years until it became redundant Timken at which point it was sold to a gear manufacturer by the name of Trudo Inc., in Richmond, Quebec, Canada of all places-sale price at the time was roughly \$40K, USD. Turdo was bought by another Canadian company by the name of Ontario Drive & Gear who had high hopes of turning the company into a captive and commercial heat treating powerhouse based on the very low electrical costs in Quebec. Well everything went bad and the heat treating department was closed down with the equipment going to auction yesterday. The furnace line was sold for \$20K at the auction (by the way it was incorrectly advertised as being built in 2018, it was actually partly rebuilt in 2018 but remains a 40 year old furnace) although we are not sure who the actual buyer was.



## Lindberg Ships Pit Nitriding Furnace

Feb 12, 2020

*"Lindberg MPH announced the shipment of a gas fired nitriding pit furnace with built-in retort to the welding industry. This pit furnace is designed for single and two stage nitriding processes and post-oxidation applications. The design accepts either one-piece work baskets or retort baffle or nest trays. The gross load capacity is 5,000 lbs. at 1200°F and the furnace chamber has a diameter of 38" and is 90" tall. The furnace is designed to produce laminar air flow to obtain the required +/- 15°F temperature uniformity."*



## Energy Efficiency in Heat Treatment Plants-ROHDE Schutzgasöfen GmbH

Feb 11, 2020

In Germany electrical costs in 2018 averaged .33 U.S. dollars per kilowatt hour. Compare that to an average of .13 U.S. dollars per kilowatt hour in the USA and you quickly realize that the cost of electricity in Germany is a major concern for all heat treaters. Furnace builder ROHDE Schutzgasöfen GmbH of Hanau, Germany recently put together a very in depth report looking specifically at the energy efficiency of their furnaces [https://www.rohdetherm.de/wp-content/uploads/2020/02/WBM\\_1\\_2020\\_JG27\\_Auszug.pdf](https://www.rohdetherm.de/wp-content/uploads/2020/02/WBM_1_2020_JG27_Auszug.pdf) (we will emphasize again that this is a very detailed report). The photo below shows 2 typical Rohde vacuum nitriding systems located at HTU Härtetechnik GmbH in Mühlhofen, Germany.



## Monday Morning Briefing

Feb 9, 2020

Back in 2016 **NTN Driveshaft** first announced the construction of a new plant in Anderson, Indiana, USA with an initial investment of \$84.5 million and the creation of 300 jobs. Just last week the company announced a \$58 million USD expansion of this facility which would bring total jobs to approximately 500. Needless to say we are mentioning this because part of this new investment will allow for in house heat treating. While we are speaking about manufacturers adding in house heat treating capacity another one which comes to mind **is Komatsu Mining Corp. Group**, in Milwaukee, WI, USA. Back in 2018 the company announced a \$300 million USD investment in a brand new state of the art manufacturing facility, one which would include a new heat treating department. While we don't believe any orders have been placed yet we do understand that these plans are moving forward.

Polish furnace manufacturer **SECO/WARWICK** issued a press release last week announcing that they had received an order from a fastener manufacturer by the name of **STALMAX**. *"In the world of heat treatment, SECO/WARWICK is known for creating innovative technological solutions for heat and thermo-chemical treatment. STALMAX, a manufacturer of fasteners, has decided to invest in one such innovation, an ATG processing line based on a belt furnace for tempering in a protective atmosphere. The provided equipment is designed for hardening fasteners, such as bolts and nuts, intended for the automotive industry. The main element of the line is a belt furnace equipped with a muffle, in which the heat process is conducted in a protective endothermic atmosphere. The applied design solutions allow for a high evenness of temperature uniformity to be achieved. The automated process of the work of the line, equipped with a weighing system, enables a precise loading of the treated elements on the hardening furnace belt."* In Clackamas, Oregon, USA (near Portland) we find a commercial heat treater by the name of **Met-Tek** who is celebrating their 50<sup>th</sup> year in business (we have had two photos of the company on the website in the past couple of weeks). Owned by a super friendly, happy guy by the name of Jerry Shriner the company is like many commercials in that it is family owned and run as Jerry works side by side with his two sons Jason and Brandon. We have two photos to go with this item, the first shows from the left **Eric Wiegele, Jerry Shriner, Brandon Shriner, and Gord Montgomery** in the vacuum department, the second shows part of the atmosphere department.



*In Texas there was a fellow by the name of **Paul Zettler** who for a number of years ran a small company doing vacuum furnaces rebuilds and installs. He disappeared from the industry for a short while, until just last week when we received this e-mail from him. "Dear Gord, Rumors of my disappearance are greatly exaggerated. Paul Zettler, formerly Senior Project Manager of **Alphatek** of Texas, Inc. has returned to availability to the Heat Treating Industry. To say what happened, in a nutshell, we worked ourselves out of customers, by reducing downtime and increasing the reliability of our customers' equipment! Customers are reluctant to call on a service company, when the equipment is working properly, and even more reluctant to pay a bill when no service is being performed! We decided that due to the limited number of furnaces in Texas, and difficulty in providing our level of service at extended distances, that Alphatek had out lived its value to the industry and was liquidated in 2019. We now have re-joined a former firm that we were affiliated with a number of years ago, High Tech Services ([www.hightechservices.com](http://www.hightechservices.com)), of Richardson, TX, designing and building custom automated process equipment, supporting vacuum processes including Heat Treatment, and located in the Dallas Area."*

**Buehler Celebrates the 100<sup>th</sup> anniversary of Wilson Hardness Testers.** Everybody in heat treating has at some point or another run across a Wilson Hardness Tester. Well the company is celebrating 100 years in the business; "Lake Bluff, Illinois... Throughout 2020 Buehler is celebrating the 100-year anniversary of its acclaimed **Wilson® hardness** brand which was originally known as the Wilson Mechanical Instrument Company. Here Stanley Rockwell and founder Charles H. Wilson introduced the Rockwell hardness tester, an industry standard. Later, Wilson became the home of the legendary Tukon line of micro-indentation testers – renowned for Knoop and Vickers testing. These early inventions revolutionized industry and paved the way for Wilson today, with innovations that improve usability and allow for full connectivity and automation like the DiaMet software and the powerful and versatile Universal hardness tester."

March 26<sup>th</sup> & 27<sup>th</sup> alloy provider **Frieder. Lohmann GmbH** of Germany will be hosting a "**Pit Furnace Symposium**" in Düsseldorf, Germany. In attendance will be speakers from companies such as **Aichelin, KGO, SECO/WARWICK, Mesa Electronics** and



others. It's interesting that pit furnaces are far more common in Europe as opposed to North America and we have never been entirely sure why. One of the sponsors of the event is commercial heat treater **Reese**, of Germany and they boast the largest pit carburizing furnace in Germany, a photo of which you can see below.



**Wall Colmonoy Announces Spring Session of Modern Furnace Brazing School in USA May 12-14, 2020.** "Take Part in the Only Hands-On Brazing Seminar. Preserving the tradition originated by the late Robert Peaslee, a brazing pioneer who invented the first nickel-based brazing filler metal, Wall Colmonoy offers a spring session of Modern Furnace Brazing School on May 12-14, 2020 at Wall Colmonoy's Aerobraze Brazing Engineering Center in Cincinnati, Ohio. Engineers, technicians, quality managers, production managers, and others will participate in "hands-on" practical applications while learning about brazing technology from the industry's leading brazing engineers. For over 60 years, Wall Colmonoy engineers have been gaining practical experience on actual problems in brazing plants around the world." In France commercial heat treater **Thermi-Lyon** (the second largest in the country) was recently awarded heat treating certifications for their Thermi-Picardie location by **Caterpillar**. The certification covers several areas including this Nitrex gas nitridder.



And we are going to round out the Monday Morning Briefing with these photos from captive heat treater and machine tool builder **Gleason Works** in Rochester, NY, USA. In addition to gear cutting equipment the company also offers **Gleason Press Quench Units** which they use in their own heat treating department as you can see here.



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## Stack Metallurgical Group, Portland, Oregon, USA

Feb 7, 2020

Commercial heat treater Stack Metallurgical has made our news section 3 times recently, first when we attended the open house of the firm's new "HIP" facility in Albany, Oregon, second when we provided a photo of their SECO/WARWICK vacuum carburizer-the largest in North America and the third time was when we showed photos of their very recent Ipsen bottom load vacuum furnace installation (all of these news items are still included in our Heat Treat News Page). The reason the company warrants such attention is that with four locations, Portland, Oregon, Albany, Oregon, Spokane, Washington and Salt Lake City, Utah Stack is the largest in the US Northwest and probably deserves to be on our list of the largest in North America <https://themonty.com/largest-commercial-heat-treats/> Stack is a family owned business, Dave and Dan Ederer to be exact and a company which isn't afraid to make a large dollar investment if the returns are there, hence their decision to invest \$25 million USD in a new HIP plant. It is what we would call a full service heat treat which is quite common in the US Northwest, Batch IQ furnaces, Aluminum Drop Bottoms, mesh belt brazing furnaces, vacuum hardening units-even an Ipsen Ion nitriding system. We have always firmly believed that a picture is worth a 1,000 words hence these 4 photos which we took just over a week ago.



Doug Puerta, CEO, Brad Kaufman, Production Manager, Mike Deaner, Maintenance Manager, Nels Plough, President, Craig Beaumier, Sales Manager



*Mike Deaner, Maintenance Manager. We have always felt that a good Maintenance Manager is worth his weight in gold and Mike is a perfect example. Mike rebuilt this over 20 year old Ipsen vacuum furnace and by the time he was finished it looked brand new.*



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## Rohde Salt Recovery Units

Feb 7, 2020

We welcome our most recent advertiser, ROHDE Schutzgasöfen GmbH of Germany whose banner ad can be found on the right hand side of this page approximately half way down. Rohde is best known in North America for their SRU (Salt Recovery



Units) <https://www.rohdetherm.de/en/produkte/verdampferanlagen/>

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We Build Heat Treating Equipment,  
and We Build Relationships.

Williams  
Industrial  
Service

419-353-2120

This advertisement features a large industrial heat treating furnace with multiple loading doors and a complex network of pipes and sensors. A red text box in the upper left corner contains the slogan "We Build Heat Treating Equipment, and We Build Relationships." In the bottom left corner is the Williams Industrial Service logo, and in the bottom right corner is a black phone number box containing "419-353-2120".

Atmosphere Furnaces

**SOLO**  
Switzerland

soloswiss.com

This advertisement features a large industrial atmosphere furnace. It consists of two large red cylindrical tanks connected to a complex metal frame and piping system. The SOLO Switzerland logo is prominently displayed in the upper right corner, with the website "soloswiss.com" below it.

## **Every Picture Tells a Story Don't It?**

Feb 6, 2020

Each of these photos were taken just last week at heat treating departments in the Northwestern, USA and each has a story attached to it-we will tell you the stories later next week and early next week. Along the same lines we expect to be able to report on the heat treating market in Portugal in just a few short weeks, which should make for an interesting change of pace. It will come as no surprise to most that the Portuguese market is quite small when it comes to captive heat treating, but what might surprise many is that Portugal is well known around the world for producing molds and consequently the country has a large number of vacuum furnaces dedicated to heat treating of molds. The largest commercial heat treating company in the country is a firm called "Ramada" which has about 20 furnaces mainly vacuum hardening and vacuum nitriding all of which are from French furnace builder BMI. Ramada has been around for over 75 years and in addition to the vacuum furnaces they also have 3 carburizing and oil quenching. While we at "The Monty" have yet to visit the firm we understand that it is a well maintained and very clean operation. We will get back to you on heat treating in Portugal.



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## **Gasbarre Commissions a Precision Gas Nitriding and Ferritic Nitrocarburizing Furnace**

Feb 6, 2020

*"Gasbarre Thermal Processing Systems recently commissioned a precision gas nitriding and ferritic nitrocarburizing furnace for a prominent commercial heat treating company located in the Midwestern United States. The furnace utilizes Super Systems, Inc. controls for automatic Kn and Kc control to AMS 2759/10 & 2759/12 specifications. The furnace is designed to meet AMS 2750/E as a Class 2 furnace, which allows it to be used to perform nitrogen tempering and stress relieving processes. For cycle time improvements and consistent process control the furnace is equipped with a vacuum pump for purging processes, pre- and post-oxidation capabilities, and accelerated air and atmosphere cooling systems. It is capable of processing workloads that are 48" wide by 72" long by 40" high and weigh up to 7,000 pounds. Gasbarre Thermal Processing"*

*Systems is proud to say that this complete system is engineered, manufactured, and serviced out of our United States locations solidifying our position as a leader in equipment for the nitriding and FNC process.*

*With locations in Plymouth, MI, Cranston, RI and St. Mary's PA Gasbarre Thermal Processing Systems has been designing, manufacturing, and servicing a full line of industrial thermal processing equipment for nearly 50 years. Gasbarre's product offering includes both batch and continuous heat processing equipment and specializes in Temper, Tip Up, Mesh Belt, Box, Car Bottom, Pit, and Vacuum Furnaces as well as a full line of replacement parts and auxiliary equipment which consists of atmosphere generators, quench tanks, and charge cars. Gasbarre's equipment is designed for your process by experienced engineers and metallurgists that understand your requirements.*



*For more information on how Gasbarre Thermal Processing Systems can manufacture custom-engineered heat treating equipment solutions for your specific thermal heating requirements, contact Eric Buchanan at (734) 855-5460 or via email at [ebuchanan@gasbarre.com](mailto:ebuchanan@gasbarre.com). You can also visit our website at [www.gasbarre.com](http://www.gasbarre.com) and find us on LinkedIn (Gasbarre Products Inc.), Twitter (@gasproinc), and Facebook (Gasbarre Products Inc.)."*

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\* 1 week availability limited to standard products in stock, while supplies last. (Some restrictions apply.) Typical delivery 8 to 10 weeks for castings of existing patterns. Ask about our Staged Delivery™ options.

## FPM Heat Treating Consolidating Plants

Feb 5, 2020

There was a news report in several Milwaukee, WI, USA newspapers and on this site reporting that commercial heat treater FPM Heat Treating based in Elk Grove, Illinois,



USA would be closing their facility at 11200 W. Heather Avenue in Milwaukee by mid May of 2020. As it turns out this report was not entirely accurate. The company will be relocating the equipment from this plant to their other locations and all the employees at this facility have been offered jobs at either the Elk Grove or Cherry Valley locations, an offer which a number of employees have accepted. FPM is one of the largest commercial heat treaters in North America as rated by "The Monty" <https://themonty.com/largest-commercial-heat-treats/> This photo shows part of the FPM team at the Elk Grove plant back in 2018 when we last visited.

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## Thermal Modification Technologies/ Tualatin, Oregon, USA

Feb 5, 2020

The commercial heat treating industry all around the world is dominated by family owned businesses-as "The Monty" has always been a family owned business we have always had a soft spot in our hearts for these companies. Out near Portland, Oregon Thermal Modification Technologies is a perfect example. The President is Andy Tobin (who can be seen standing on the carbottom charge car) who is the grandson of the original founder. The firm has approximately 50 employees and is a perfect example of a "full service" heat treater, carbottom furnaces for stress relieving and annealing, batch IQ furnaces, Ion Nitriding, Induction Hardening and Vacuum hardening, there really are few processes that the company doesn't offer. The various processes reflect the fact that the market in Oregon is very diversified, we saw automotive parts, structural steel products, oil field components, parts for the logging industry-it was a wide variety which must be a comfort during economic downturns. These photos will give you an idea about the firm, basically a clean, well organized plant with lots of room to grow and expand which is Andy's stated goal-and a nice bunch of people to boot.





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## Aerospace Testing & Pyrometry Opens Regional Office in Greenville, SC

Feb 5, 2020

*"Aerospace Testing & Pyrometry would like to announce the opening of our newest regional office in Greenville, SC. The new office will be headed by our Southeast Division Manager Richard Rasmussen. The territory will include North Carolina, South Carolina, Virginia, Georgia, Tennessee and Alabama. Andrew Bassett, President of Aerospace Testing & Pyrometry states, "With the numerous aerospace primes and supporting companies flooding the southeastern US and the high demand for our services from the southeast region for ATP's Pyrometry Services, we decided to open a permanent office in the Greenville, South Carolina to better provide our services. We have been supporting our current clients from the east coast, but now with an office in the Greenville, we will be able to grow and expand those services. The Southeastern US provides an excellent opportunity for growth with numerous Nadcap Heat Treat accredited facilities in the area, as well as captive & commercial heat treaters looking for expert and affordable onsite Pyrometry services."*

*Richard Rasmussen started out as our West Coast Division and has been with ATP since 2016. Richard has over 15 years of experience in the heat treating and Pyrometry field. His experiences includes Pyrometry technician, furnace operator and a qualified FAA hardness inspector. Richard was previously employed at a Nadcap accredited heat treat facility that was able to achieve merit status during his tenure. He was responsible for all Pyrometry testing and compliance for entire thermal processing equipment. One of his best attributes is his ability to troubleshoot and resolve issues with heat treating furnaces. He has a full understanding of AMS-2750E as well as prime aerospace Pyrometry specifications and has heat treat audit experience.*

*About ATP: Aerospace Testing & Pyrometry, Inc. is an ISO/IEC 17025 accredited company specializing in the onsite calibration of temperature processing instrumentation, calibration of vacuum measuring systems and temperature uniformity surveys for thermal processing equipment. We also specialize in consulting and training in Pyrometry*

*Specifications, Heat Treat Consulting & Procedure Writing and Consulting for Nadcap Accreditations in Heat Treating, Non-Destructive Testing (NDT), Welding, Brazing & Materials Test Laboratories. With offices located in Bethlehem, PA, Stroudsburg, PA, Hartford, CT, Cleveland, OH, Tulsa, OK, Los Angeles, CA, Greenville, SC, Bedford, OH (Lab) and Muskegon, MI, our services have reached through-out the United States, Mexico, Canada and Europe. For more information, please visit [www.atpcal.com](http://www.atpcal.com) or call Andrew Bassett at 844-828-7225"*



*Andrew Bassett, Gord Montgomery, Tom Zimmerman*

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## **Oregon Induction + Thermal**

Feb 4, 2020

Oregon Induction + Thermal is one of a very rare breed of commercial heat treater in that they have grown and prospered over the years largely by offering Induction hardening. As a matter of fact we can count on the fingers of one hand the number of commercials in North America who concentrate on induction work. Probably the fact that they have been successful at it is because they can handle such a wide variety of parts, shafts up to 14' long on a vertical scanner, and gears with a diameter of up to 14'. Having said that the company recently changed their name from Oregon Induction to Oregon Induction + Thermal to reflect on the fact that the company also offers carburizing and aluminum processing. The carburizing department has a number of Beavermatic IQ furnaces (funny how you really only see Beavermatic furnaces on the west coast of the USA or in Texas) and the aluminum department has two medium size aluminum drop bottom ovens. Oregon is a family owned business started in 1981, run by Jeremy Parker son of the founder of the company and in total occupies roughly 40,000 square feet. With over 50 employees we would say this is a larger than average commercial operation and like many in the industry in North America these days they report that business has been good and continues to be good. These photos give you more details.



*Tony Moran, Cindy Barbo, C.F.O.O., Jeremy Parker, Owner & President*



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## **TS USA, Chattanooga, TN, USA**

Feb 4, 2020

In Tennessee, USA commercial heat treater TS USA had a small fire which made headlines in many of the local newspapers but caused very little actual damage as it was put out quite quickly. We weren't familiar with the name to begin with however a little research gave us the whole story. This facility is part of HEF Group and it was set up roughly 3 years ago with an initial investment of approximately \$3 million USD.

We actually interviewed the CO of the company Dr. Rajiv Ahuja two years ago and this is his summary of the company;

First off Dr. Ahuja I would appreciate it if you could share some information with us about HEF Group worldwide, what you do when you started etc.; *"HEF Group, which has been in business for more than 50 years, is headquartered in France and is a leading global provider of surface treatments and coatings for wear, corrosion and friction reduction. Our two primary surface technology options are Liquid Nitriding and Physical Vapor Deposition (PVD – specifically diamond-like carbon DLC coatings) – the only supplier that offers both technology options. In addition we do offer a whole range of other surface treatments to meet customer specific needs. HEF is an employee owned company and a majority of our 2,000 associates are shareholders."*



Would it be correct to say then that HEF operates as a worldwide commercial heat treater and surface engineering company? *"HEF Group currently operates 60 facilities in 20 countries. Most of them are facilities owned 100% by HEF – and a few of them are joint-ventures. These facilities provide surface treatments and coating jobbing services to local customers. A large proportion of our customers are automotive. Other major industrial*

segments where our technologies find applications include: Oil & Gas; Hydraulic & Pneumatic equipment; Industrial Equipment; Construction and Material handling equipment; Power generation equipment etc.”

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## Hauck Heat Treatment, SECO/WARWICK

Feb 4, 2020

A couple of weeks ago we had a news item about Hauck Heat Treatment in the Netherlands installing a new very large SECO/WARWICK vacuum furnace. We now have the official press release from SECO. To see the relative size of Hauck compared to other European heat treaters we would suggest this link; <https://themonty.com/largest-european-commercial-heat-treaters-february-2019/>

*“An all-metal high vacuum furnace with working dimensions of 1200x1200x2000 [mm] is the first of its kind and was delivered to HAUCK HT’s newly expanded plant in Eindhoven,*



*The Netherlands. This is the largest vacuum furnace of this type in the Benelux region. This furnace was the third SECO/WARWICK furnace delivered to this location (previously, in 2015, Hauck installed two retort tempering furnaces with vacuum purging in the Eindhoven plant). Apart from the cooperation with the Eindhoven plant, SECO/WARWICK established a strong cooperation with the HAUCK HT plant located in Poland where new vacuum furnaces are also scheduled to be delivered. HAUCK Heat Treatment Group is a strategic company in the heat treatment industry and, in consideration of their mutual trust and partnership, further cooperation with SECO/WARWICK will progress.”*

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## Monday Morning Briefing

Feb 2, 2020

To start off the week we are pretty excited to have an interview with **Mr. Jeff McLaughlin**, founder, owner and CEO of **McLaughlin Furnace Group** based in Avilla, Indiana, USA. When we searched around for a cool picture to go with this story we came across this recent photo showing Jeff doing a furnace installation in Viet Nam. As you can see in spite of the fact that Jeff is the owner and founder of the company he is a very “hands on” guy.

[Click Here To Read The Interview](#)



Commercial heat treater **FPM Heat Treating** based in Elk Grove, Illinois, USA has announced that they will be closing their facility at 11200 W. Heather Avenue in Milwaukee by mid May of 2020. While this plant will be closed the equipment is being moved to other FPM locations and all of the employees are being offered jobs at the Cherry Valley or Elk Grove locations. FPM is one of the largest commercial heat treaters in North America as rated by “**The Monty**” <https://themonty.com/largest-commercial-heat-treats/> In Clackamas, Oregon, USA (near Portland) commercial heat treater **Met-Tek** is celebrating a milestone few companies reach-their 50th year in business. In this picture we see on the left **Jason Shriner** and on the right **Jerry Shriner**, owner and President. More on the company later this week.



Last week we had a news item and several photos about a brand new aluminum processing line at **Heat Treat 2000** in the UK-here is the abbreviated press release; “*We are about to announce the opening of a new £3 million heat treatment facility for aluminium processing. It is sited adjacent to our existing facility and complements our current aluminium capability and the 300 tons per week of fasteners and presswork we currently heat treat. The investment consists of a suite of automatic computer controlled rapid quench furnaces capable of taking up to a 3 ton charge which can be quenched in*

*temperature controlled cold water, hot water or polymer. The latter is followed by an agitated rinse and hot power wash to ensure product cleanliness. This is supported by new precipitation ovens with automatic door opening. Furnaces are a combination of gas and electrically heated opening up new opportunities as well as meeting increased demand for our services. Our investment doubles capacity giving us one of the largest processing capabilities in the UK. Bar code tracking and scanning have also been introduced providing live data which can be accessed remotely.” To go with this story we also have these photos of the line as it was being installed.*



You really can't consider this a heat treat news item but there is a connection in that both **Borg Warner** and **Delphi** maintain large captive heat treat departments, in particular Borg Warner. The Borg facility in Ithaca, New York, USA is by any standard very substantial and quite up to date in terms of heat treating technology. Built in the 1970's it would best be described as a campus in that it sprawls over hundreds of acres. If we ever put together a list of the most impressive and most picturesque heat treats in the world the Borg Warner location in Ithaca will be on that list. “Shares of Delphi Technologies PLC soared 61% Tuesday, after BorgWarner Inc. said it's acquiring the company in all-stock deal with an enterprise value of about \$3.3 billion. BorgWarner **BWA, -0.40%**, which makes parts for combustion, hybrid and electric vehicles, said Delphi shareholders will receive 0.4534 shares of its stock for each Delphi **DLPH, +0.00%** share owned, equal to \$17.39 a share in cash. That represents a 77% premium over Delphi stock's closing price Monday. Upon closing, BorgWarner shareholders will own about 84% of the combined company, with Delphi shareholders owning the remaining 16%.”

It's only 4 weeks until **ASM Heat Treat Mexico** takes place in Queretaro, Mexico, the exact dates are March 3-5<sup>th</sup>. We have attended this event in the past and found it to be quite worthwhile, so much so that we at “The Monty” will be attending again this year and taking the opportunity to visit a number of captive and commercial heat treaters in the area. An example from our last trip includes this picture taken in the heat treating department of auto parts maker Sisamex. More details



about this show can be found by clicking on the Heat Treat Mexico banner ad on this page.

We regret to mention the passing of **Jack Palmer** in the Portland, Oregon, USA area. Jack spent most of his working life involved in the commercial heat treating industry in the Portland, Oregon, area with companies such as Spencer Heat Treat. Jack passed away January 11<sup>th</sup> and a memorial service was held for him this past Saturday. His legacy lives on in the form of his son Todd who is involved in the heat treating department of **Blount Inc.**, in Portland a manufacturer of chain saw components and captive heat treater. Commercial heat treater **Metex Heat Treating** in Mississauga, Canada continues to grow, this time they will be adding another large batch IQ furnace. Last week we had a picture of a really cool bottom loading vacuum furnace installation in Portland, Oregon which prompted us to ask the question; **what % of new vacuum furnaces manufactured are bottom loading (vertical) as opposed to horizontal loading?** Our guess by the way was 5-10%. We had a “vacuum guy” with over 40 years experience suggest it was probably around 8% which sounds about right.

Heat treating around the world. To round things out for Monday February 3/2020 we have this picture from **Lima, Peru** which we took in April 2018. What you are looking at is an Ion (Plasma) nitriding system located at a company by the name of **Tratar** in Lima. It was built by a company by the name of **Ion Heat** which is making a name for itself around the world as an up and coming furnace builder.



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EQUIPMENT BEFORE PURCHASE.**

# BATCH IQ FURNACES

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

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## **Item#IQ472 GM Batch IQ 24" x 24" x 36"**

Front loading aluminum furnace Load size is 24" X 24" X 36" long. Has a Fanuc PLC. Runs great and is a nice small compact size. There is a added on Rinse tank in front of the furnace for rinsing off quenchant.

**Asking Price \$40,000 USD**

<https://themonty.com/project/itemiq472/>

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## **Item#IQ471 Complete Batch IQ Installation (Europe)**

We have available a very complete batch IQ installation located in Europe.

Installation includes;

-3 Batch IQ furnaces with working dimensions of 750mm X 1200mm X 750mm high

and a load capacity of 1000Kg. One is electrically heated and set up for carburizing with Endothermic atmosphere. Two are gas heated with WS burners (8 burners in each furnace) and set up for carburizing with endothermic atmosphere. Manufactured by Italian company CITT in 2002.

-3 electric tempering furnaces built in 2002. Working dimensions of 750mm X 1200mm X 750mm high and a load capacity of 1000Kg. Two are rated for 350C and the third 650C.

-Burnishing tank built in 2002.

-Spray washer, electrically heated, operating temperature of 120C.

-Two endothermic generators, electrically heated, both built in 2002.

Asking Price 500.000 euro, including 1 year guarantee and installation (packing and transport not included, installation depends upon country of installation). All equipment is complete and in good condition but not in use. Baskets and base trays included. Complete details available upon request. **Available immediately.**

## **Item#IQ465 Surface Combustion “Super 36” Batch IQ Furnace**

Manufactured by Surface Combustion in 2001 this is a gas fired batch IQ furnace with working dimensions of 36" X 48" X 36" and a weight capacity of 3500 pounds. Set up for endo atmosphere. Pneumatically actuated quench elevator , top cool, furnace fan and updated SSI touch pad controls. Currently installed but not in use. Very good condition.

**Asking Price \$160,000 USD**

<https://themonty.com/project/surface-combustion-super-36-batch-iq-furnace/>

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## **Item#IQ463 Ipsen T-7 Batch IQ Furnace**

Ipsen Model: T7-1000-DGM Batch IQ Furnace. Serial #52044. Type: Straight Through Atmosphere Integral Quench Furnace

Processes: Carburizing, Neutral Hardening and Carbonitriding

Heat Input: Natural Gas-Fired (12 Silicon Carbide Radiant Tubes)

Work Zone: 30"W x 48"D x 20"H

Max. Temp: 1850°F (Typically operated at 1750°F)

Max. Load Wt.: 1350 lb at 1550F

Quenchant Heating and Cooling: Yes (SBS Oil Cooler)

Loading/Unloading: Ipsen “T7 Trans. Loader” powered Front-end Loader and Roller Unload Table

Pit Required: None

Carbon Control: SSI Gold Probe

Controls: Super Systems, Inc. 9120 touch screen, with SSI Series 7 & 7SL controllers, Digital data logging (currently tied into plant-wide SSI Super Data system)

Insulation Type: Brick-lined

Condition: Refurbished by Unitherm, Converted to Eclipse Recuperative Burners (still under warranty)

Included: Any available spare parts, Ammonia Tank.

Footprint: 8'-6" Wide x 27' Long x ~14-1/2' High

Alloy: Grids and baskets may be available

**Asking Price \$59,000 USD**

<https://themonty.com/project/itemvf350-ipse...-batch-iq-furnace/>

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## **Item#IQB461 Surface Combustion Batch IQ**

Surface Combustion Batch IQ Furnace. Standard Surface Combustion Integral Quench Furnace with single quench cylinder and rear handler. This furnace has “Trident” type radiant tubes with Eclipse burners and Eclipse recuperation. Natural gas fired 1,000,000 BTU’s. Serial Number BX-35790-1. Max operating temperature 1750°F with a voltage of 460/3/60. Working dimensions of 30"W x 20"H x 48"L. Approximate external dimensions 10'w x 10'h x 15'l. Controls: Mounted and wired in a free standing panel includes a current SSI control system with PLC and computer. Very good condition and available immediately.

**Asking Price \$65,000 USD**

<https://themonty.com/project/itemb461-surface-combustion-batch-iq/>

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## **Item#IQB445 Surface Combustion Batch IQ's (3 Available)**

Surface combustion gas fired batch IQ furnaces model “Super 36”. Working dimensions of 36" wide X 48" deep X 32" high. Late 1980's vintage. Casemate controls, SBS quench oil filter. Set up for endo atmosphere with ammonia addition. Furnaces were in operation until February 27th 2018, now in indoor storage in the Detroit, Michigan area. Complete and in good operating condition. Alloy and brickwork in reasonably good condition.

**Asking Price \$99,000 USD Each Loaded On A Truck**

<https://themonty.com/project/itemb445-surface-combustion-batch-iqs-3-available/>

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## **Item#IQ441 GM Batch IQ Furnace**

GM Batch IQ with Top Cool. Manufacturer: GM. Type: Integral Quench Furnace with Top Cool. Heated: Natural Gas – 1.2 M BTU's/Hour. Max. Temperature: 1450-1875 deg. Voltage: 460/3/60. Work Area: 36"W x 36"H x 48"L. Controls: All mounted in two freestanding panels next to the furnace. Includes motor starters relays, pushbuttons, signal lights etc. Honeywell indicating controller and

overtempt. Honeywell circular chart recorder for recording temperature. Carbon control system.

Description: Furnace has (4) "U" shaped radiant tubes mounted vertically, (2) on each side wall. Heated by recuperated burners. Alloy roller rail hearth, alloy circulating fan, dual quench cylinders, top cool chamber and heated quench tank. Brick lined with fiber roof. Rear handler system, 1998 vintage. Installed, complete and operational. Condition: Very Good. Availability: Immediate.

**Asking Price \$150,000 USD**

<https://themonty.com/project/itemb441-gm-batch-iq-furnace/>

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## **Item#IQ439 Surface Combustion Batch IQ Furnace**

Surface Combustion "Allcase" batch IQ furnace with working dimensions of 36". X 48" X 30" high. Natural gas heating, 1 MBTU's/Hour. Maximum operating temperature of 1750F, voltage 460/3/60. External Dimensions: 10'W x 12'H x 15'L. Controls: All mounted in a panel attached to the furnace includes motor starters relays, pushbuttons, signal lights etc. Honeywell digital strip chart recorder for recording temperature, indicating controller and overtemp. Partlow controls for oil heating/cooling. Description: Surface Combustion Allcase Furnace with (6) "U" shaped radiant tubes mounted vertically 3 on each side wall. Fiber lined. Alloy roller rail hearth, alloy circulating fan, dual quench cylinders, top cool chamber and heated quench tank. Furnace has some missing components (temperature controls, pressure switches, ignition transformers, regulator) which will be replaced prior to shipment. Condition: Very Good.

**Asking Price \$80,000 USD**

<https://themonty.com/project/itemb439-surface-combustion-batch-iq-furnace/>

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## **Item#IQ438 Holcroft Batch IQ Furnace Line**

Holcroft Batch IQ Furnace Line. Model GP2500. Serial Number S/N #CJ-4233. Installed new in 1980. Gas fired, working dimensions of 30" X 48" X 30" and a capacity of 2500 pounds. Furnace was operational until shut down on 11/30/17 when plant closed. Also included is a double ended charge car (Holcroft) to handle loads of 30" X 48" and a Holcroft Spray/Dunk washer with heating system 30" X 48" X 30". Complete, in very good condition and ready to go.

**Asking Price \$60,000 USD**

<https://themonty.com/project/itemb438-holcroft-batch-iq-furnace-line/>

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## **Item#IQ398 Sauder Batch IQ Line**

Sauder Batch IQ Line. Serial Number 881978-83. Electrically heated 480/3/60/150kW total load. Maximum operating temperature of 1850F. Working dimensions of 24" Wide X 24" high X 36" long. Controls; Mounted and wired in an enclosure attached to the right hand side of the furnace includes a Marathon 10 Pro digital temperature controller, Marathon Carbpro digital carbon controller, Barber Colman analog high limit and a Honeywell digital strip chart recorder. Three power meters are face mounted to the same enclosure which monitor power in each zone of the furnace. A Halmar "SCR" power controller controls power to the heating elements. Two (2) Allen Bradley PLC controllers are mounted in the same enclosure. Standard In/Out Integral Quench Furnace w/Top Cool. This line consists of IQ furnace with top cool, heated quench tank, charge car, dunk & spray washer, temper furnace, SBS oil cooler, scissors table, atmosphere flow panel and several spare parts. Very good condition. Asking \$125,000 USD for the complete line. Shipping Dimensions:

Temper Oven: 72"W x 11'H x 72"L

Washer: 80"W x 10'3"H x 120"L

Furnace: 109"W x 11'H x 96"L

Quench: 106" x 10'H x 72"

Top Cool: Skid – 5' x 5' x 6'H

Charge Car: 78"W x 60"H x 86)L

Misc. skids, flow panel, SBS, spare parts

**Asking Price \$125,000 USD**

<https://themonty.com/project/itemb398-sauder-batch-iq-line/>

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# BATCH FURNACES

See something you need, click on the link or scroll through all the items for sale.  
Searching for something we don't have listed, let us know.

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## Item#B476 Gas Fired Car Bottom Furnace

Working dimensions of 49" wide X 85" long X 39" high. Operating temperature of 1125-1650F. Blu-Surf open flame burners. No atmosphere addition. Currently installed and in operation. Burners replaced 4 years ago. Runs well, however at some point the rails and floor bed will need to be replaced.

**Asking \$29,000 USD**

<https://themonty.com/project/itemb476-gas-fired-car-bottom-furnace/>

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## Item#B475 BOREL Electric Chamber Furnace – Switzerland

### Technical data

- Year of manufaturing : 2018
- Maximum temperature : 1100°C
- Multilayer insulation. Interior in ceramic fiber and refractory bricks.
- 3 x 400 VAC, 50 Hz
- Axron Swiss temperature controller/programmer.
- Delivered with removable ceramic sole.
- Internal dimensions (WxHxD) : 680 x 680 x 530 mm
- External dimensions: (WxHxD) : 1100 x 1780 x 1090 mm
- Internal volume : 245 liters
- Power : 14 kW
- Net weight : 450 kg

Excellent condition, brand new. With manufacturer's instruction manual. Currently located in Switzerland : Porrentruy (2900).

**Asking Price €10'000 Euro**

## **Item#B474 New Pyradia Inert Atmosphere Retort Furnace**

Furnace Construction: Bottom Loading Retort Electric Furnace w/ Semi-Automatic Electro-Pneumatic. Loading Cart. Ceramic Fiber Insulation. RA330 Sealed Retort Construction. Primed & Painted 3/16" Steel Shell. Working Dimensions: ø36" x 30"H. Retort Inside Dimensions: ø44" x 36"H. Design Temp: 2000F. Working Temp: Up to 1800F. Uniformity: +/-25F @ 1800F. Heating Power: 180KW, Watlow SCR. Heat-Up Ramp: Ambient to 1800F in 120 min (loaded oven). Max Gross Load: 800lbs. Heating Element Type: Sandvik ROB Heating System w/ APM Heating elements. Furnace Atmosphere: Argon/H<sub>2</sub> Mix (<4%). Voltage: 600/3/60. Amperage: 200 amps. Recirculation Fan: Plug Type, Radial, 3 HP, Water Cooled. Cooling: External to retort, 5 HP blower with additional 1/2 HP forced air fan. Instrumentation: AMS2750E, Type B compatible. Gas Panel: Complete Ar/H<sub>2</sub> gas panel with flowmeters, pressure regulators, manual & solenoid valves & flow switches, SSI O<sub>2</sub> sensor, SSI Dew point sensor. Controls: NEMA 12 electrical enclosures, Micrologix PLC, Kep 7" Touchscreen HMI, Eurotherm Nanodac Temperature Controller, Eurotherm 3216 Limit Controller, Eurotherm 6100A, Digital Chart Recorder w/ Up to 12 Recording Inputs for Load TCs, Batching capability, Bar Code, Scanner, Uninterrupted Power Supply (UPS), 1-Ton Air cooled Temptek TCU, CSA Approved. Extras: 2x Forced Air Cooled Tables, 2X Carbon Fiber Fixture Grids. NEW!

**Asking \$375,000 Canadian (Approximately 295,000 USD)**

<https://themonty.com/project/itemb474-pyradia-inert-atmosphere-retort-furnace/>

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## **Item#B473 Pit Carburizing Furnaces (2 available)**

Manufactured by Surface Combustion these are gas fired units with an operating temperature of 1750 F. SSI controls. Working dimensions of 48" X 72". Endo atmosphere with recirculating fan in the bottom. Currently installed but not in use. Excellent condition.

**Asking \$150,000 USD Each Loaded On A Truck**

<https://themonty.com/project/itemb473-pit-carburizing-furnaces-2-available/>

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## **Item#B472 Ionitech's Plasma Nitriding Cold-Wall furnace**

Ionitech's Plasma nitriding Cold-Wall furnace ION-75CWI, with 2 Chambers and one control. The furnace is capable of Plasma Nitriding, Plasma nitrocarburising, and Post-oxidation, processing big and small parts and tools. The furnace has been used for 4 years at Ionitech's facility and has been taken care of perfectly – it is good as new. It still works daily. It has been retrofitted to work with our absolutely user-friendly touchscreen control panel. The process is really easy to control. Ionitech gives full time support as maintenance and technology after purchase. Working dimensions of Chamber 1 are Ø 1000 mm x 1100 mm and max weight of tool for processing 1500 kg. Chamber 2 – Ø 750 mm x 2000 mm and max weight of tool for processing 1500 kg. Purchase can be done with only one chamber. Located in Europe.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemb472-ionitech-plasma-nitriding-cold-wall-furnace/>

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## **Item#B471 Lindberg Pit Nitriders**

Lindberg Pit Nitriders. Lindberg Cyclone "Pit Nitriding" furnace with removable fan assembly & retort. There are twelve (12) bolt locks which seal the fan assembly to the gasket on the retort. Fan assembly sets on a steel stand when not in use. Alloy retort sets in a steel support when not in use. Electrically heated with a voltage of 230/3/60/105 kW. Model # 3896-E12 and serial # 14030. Max operating temperature is 1250°F. Working dimensions of 36" diameter x 84" deep with external dimensions of 5'w x 9'4"H x 7'l – Furnace Only. Controls mounted and wired in a free standing panel includes all necessary controls for proper operation.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemb471-lindberg-pit-nitriders/>

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## **Item#B452 AHT Fluidized Bed Furnace**

Applied Heat Technologies (AHT) fluidized bed furnace. Treatment chamber is 300 mm diameter x 900 mm deep (roughly 12 in diameter x 36 in deep.)

Maximum temperature is 1050 °C (1922°F). Maximum load is rated at 50 kg at 1000 °C (110 lb at 1832 °F) and 90 kg at 570 °C (198 lb at 1058 °F.) Mark® fluid bed furnace controller software. Silicon carbide heating elements, 25 kW, configured in delta. Piping is set to accept nitrogen, argon, hydrogen chloride (HCl), and hydrogen gasses. Inert material is P120 grit aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) powder. The fluidized bed is designed to deposit vanadium carbide (and other carbides with correct chemistry) onto steel. The fluidized bed system comes with a propane burner, HCl detection system, and scrubber system. The system also has a hood and quench bed that came with it but these have not been used and it cannot be verified that they work. The fluidized bed system with scrubber is currently operational but is not being used. Almost new heating elements with one spare included. **Asking Price \$99,000 USD**

<https://themonty.com/project/itemb452-aht-fluidized-bed-furnace/>

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## **Item#B448 Kleenair Products Tip Up Style Furnaces**

Tip Up Furnaces (3 available). Manufactured by Kleenair Products these "Tip Up" style furnaces have working dimensions of 60" wide X 60" high X 72" long. Natural gas heating-1200CFH. Maximum temperature 1500F & 2000F. 460/6/60 electrical. External dimensions of 8'W x 10'6"H (closed) x 14'L Each, 13'6"H when open. Controls: Temperature controls are missing. There is one (1) control cabinet which houses the flame relay modules, motor starters etc. and is common to all three (3) furnaces. Description: Currently available are two (2) 1500°F furnaces and one (1) 2000°F furnace. There is also one (1) loader and one (1) quench tank. Furnaces are ceramic fiber lined with Eclipse "TJ" direct fired burners. Burners fire from top rear and bottom front under the refractory piers. Dual hydraulic cylinders open/close the furnace cover. One (1) common hydraulic power unit for all three (3) furnaces. We will separate the line to sell individually or as a whole. We can provide hydraulic power units for each furnace. Very good condition.

**Asking Price \$55,000 USD Each**

or

**\$150,000 USD For All Three**

<https://themonty.com/project/itemb448-kleenair-products-tip-up-style-furnaces/>

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## **Item#B436 Lindberg Pit Gas Nitriders**

36" x 60" pit gas nitriders (Lindberg Homo Nitriders – electric) built in late '70's, c/w with Super Systems Gas Nitriding Control system built in 2012. System was operational up until decommissioning last year, when it was replaced with new equipment. Price includes fixtures shown in pictures.

**Asking Price \$50,000 USD**

<https://themonty.com/project/itemb436-lindberg-pit-gas-nitriders/>

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## **Item#B426 Plateg Plasma Nitriding Unit**

Manufactured by Plateg this is a Plateg Puls Plasma Nitriding unit. Type; Hot Wall Plasma Nitriding Furnace (Tandem). Built in 1997, the programmer was replaced in 2017. Working dimensions of 1000 mm diameter X 1250 mm high. Load capacity 1000 kg. Installed power 95 kW, 400 V, 50 Hz, 160 A. Located in Turkey.

**Asking Price \$98,000 Euro**

<https://themonty.com/project/itemb426-plateg-plasma-nitriding-unit/>

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## **Item#B415 J.L.Becker Car Bottom**

J.L. Becker Car Bottom. Working Dimensions are 96" wide x 180" Long x 66" High with a Maximum Temperature of 1,800 Deg. F. Natural Gas fired with 4.3 Million Btu's. Serial Number: J 2060. Double Ended Car Bottom with Air Operated Doors to accommodate Dual – Full Length Motorized Cars. Each Car is 108" wide x 200" long with Castable Refractory Floor Insulation – Sand Sealed. The Furnace is Fiber/Refractory Lined with 8 Tempest Burners (4) per side wall, firing opposite and opposed. The Exhaust Flues are floor level mounted for excellent temperature uniformity. Temperature Controls : Free Standing Panel Honeywell Digital Controls and Honeywell Tru-line Circular Chart Recorder.

**Asking Price \$95,000 USD**

<https://themonty.com/project/itemb415-j-l-becker-car-bottom/>

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## **Box Furnaces**

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### **Item#BOX471 Lindberg MPH 1500°C Heavy Duty Tube Furnace**

- Model #54679
- Serial No. AO30680
- (New price is approx. \$15,000)
- Furnace is approximately 10 years old, however in excellent condition
- 208/230 3ph
- 19.8 KW
- Max temp 1500°C
- Porter Flow Meters
- Max recordable flow of nitrogen is 281 cc/min
- Max recordable flow of hydrogen is 744 cc/min
- Hydrogen burn off feature
- Ceramic tube 2.5" OD x 2.25" ID x 68" long approx.
- Insulated box is 50" long
- Three zone programmable digital control

Optional: 460V/230V, 25kVA, 3 phase step down transformer: \$1,200.00

Prices are FOB Souderton, Pa., packed for shipment. Complete with all operational drawings and instruction manuals and spare part heating elements.

**Asking Price \$3,000 USD**

<https://themonty.com/project/itembox471-lindberg-mph-1500c-heavy-duty-tube-furnace/>

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### **Item#BOX470 GLOBAR Heated Box Furnace**

Manufacturer: Pereney

Inside Dimensions: 18" high x 18" wide x 18" deep

Heated: Electric, 440/3/60, 34 KW

Temperature: 2700 deg. F

Model Number: SM-7800-117

Serial Number: N/A

Description & Features: Manual hinged door. Fully brick lined heat chamber. Silicon carbide hearth. Globar heating elements above and below the hearth. Tap changing transformer.

Temperature Controls: Wall-mounted control panel with indicating controller and overtemp.

Condition: Very good.

**Asking Price \$11,500 USD**

<https://themonty.com/project/itembox470-globar-heated-box-furnace/>

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## **Item#BOX469 SierraTherm Forced Convection Elevator Batch Oven**

SierraTherm LTCC16-24-4A 8500 Series Forced Convection Elevator Batch Oven. The internal dimensions of the chamber are approximately 18" inches wide by 18" inches deep by 24" inches high. The advertised temperature achievable is 1050°C. The Oven comes with the two computers, one monitor, one mouse, & one keyboard, as shown. One computer has the SierraTherm Furnace Monitoring System Software loaded on it, as shown. The power requirements are 240Vac 3-phase 60Hz. Each of the computers power-up although only one has the SierraTherm Furnace Monitoring System Software loaded on it.

**Asking Price \$42,500 USD**

<https://themonty.com/project/itembox469-sierratherm-forced-convection-elevator-batch-oven/>

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## **Item#BOX468 SierraTherm Elevator Hearth Box Furnace**

Model; LTCC-16-24-4A. Voltage; 240V 3Ph 109A 60Hz. Maximum operating temperature of 1050 degrees C. Working dimensions of 16" high x 24" wide x 24" deep.

### **General Application Parameters:**

- o Maximum Temperature Rating: 1050° C
- o Atmosphere System: Designed for air atmosphere.
- o Heating Method: Ceramic fiber block with imbedded resistive wire heating elements.
- o Batch processing: bottom load elevator

Rated to 1050 °C, this SierraTherm Series features an energy efficient, ultra clean, low mass refractory heating chamber. All models include the MicroTherm Windows based user interface with 20 segment temperature and gas flow

programming. Temperature cycling can be programmed using starting and ending temperature, rise and cooling rates, and time duration. Multiple vertical heated zones, as well as power trimming to all four element panels (left, right, front, back) provide for precise temperature stability and control throughout the process chamber. A sophisticated atmosphere inlet and exhaust system features four independently adjustable gas inlets and corresponding exhaust ports to efficiently extract burn-off effluents throughout the process chamber. Excellent condition.

**Asking Price \$59,500 USD**

<https://themonty.com/project/itembox468-esierratherm-elevator-hearth-box-furnace/>

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## **Item#BOX466 Grieve Top Loading Furnace**

Model# PT-3642, Serial# 140. Manufactured by Grieve this is a top loading furnace with working dimensions of 36" Wide X 42" Deep X 36" Long and a capacity of 31.5 cubic feet. Electrically heated 460/3/60 @ 70 KW, 2,000 F maximum operating temperature. Description; Manually operated counter balance door, brick lined, helical coil Kanthal heating elements on all four sides, gasketed cover fully self contained. Temperature Controls; Honeywell "Dial a Troll" control with "Dial a Pak" Overtemp. Built in 1982. Very good condition.

**Asking Price \$14,500 USD**

<https://themonty.com/project/itembox466-grieve-top-loading-furnace/>

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## **Item#BOX465 Electra Box Furnace**

Electra Box Furnace. Floor model high temperature box style furnace with a manually operated vertical lift door with counterweight for easy operation. A door limit switch cuts power to the elements when the door is opened. The furnace is refractory lined and has a silicon carbide hearth plate supported on brick piers. Twenty four silicon carbide elements mounted horizontally across the furnace chamber, 12 elements over the top and 12 under the hearth for good uniform heating. Electrically heated with a max operating temperature of 3000°F. Model # 6724 and serial # 1184. Voltage of 460/3/60/16 kW. Working dimensions of 8"W x 6"H x 30"L and external dimensions of 44"W x 90"H x 70)L. Controls

are located on the right hand side at the rear of the furnace. There is a Barber Colman model 560 digital controller, a Barber Colman 560 high limit and a Barber Colman strip chart recorder. Also on the rear of the unit in a protected area is a Robicon SCR to control the elements and a high limit contactor. A voltage reduction transformer is mounted on the framework under the furnace chamber.

**Asking Price \$8,500 USD**

<https://themonty.com/project/itemb465-electra-box-furnace/>

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## **Item#BOX464 Lindberg Box Furnace**

Lindberg Box Furnace. Pneumatically operated vertical lift door with convenient foot pedal operator. The door slides up and down on the sloped front breast plate. A flame curtain is mounted directly under the door. A limit switch activates a solenoid to start the flame curtain to burn off any escaping atmosphere. The interior is refractory lined. Heavy gauge rod style heating elements are located on both side walls, and on the floor under the alloy hearth plate for excellent temperature uniformity. The alloy hearth pan has 2" high sides to prevent product from falling off the pan. Flow meters attached to the side of the furnace regulate the flow of atmosphere into the furnace. There is an Endothermic gas flow meter and a Natural Gas flow meter. Electrically heated with a max temperature of 2000°F. Model # RO 122410-A and serial # 19229. Voltage is 480V/3/60/15 kW, 67V. Working dimensions of 12"W x 10"H x 24"L with external dimensions of 54" wide x 64" long x 85" high. Controls are mounted and wired in a separate enclosure. There is a Leeds & Northrup digital temperature controller with display screen and a Leeds & Northrup model 2077 high limit safety. Control switches are flush mounted on the front of the panel. The panel has a Square D flange mounted fused disconnect switch. Honeywell flame safety relay, purge timer relays and control transformer are mounted inside the enclosure A second enclosure with circuit breaker disconnect switch houses the Halmar SCR power controller. A step down transformer is supplied to provide low voltage to the elements.

**Asking Price \$7,500 USD**

<https://themonty.com/project/itemb464-lindberg-box-furnace/>

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## **Item#BOX458 Noble Furnaces Box Furnace**

Manufactured by Noble Furnaces this is a gas fired box furnace capable of 2,000F. Furnace has a vertical lift front door with a charge car and retort. Furnace has working dimensions of 8' X 8' X 6" high (approximate). 330SS retort has working dimensions of 70" diameter X 42" high. Vendor has been processing aerospace parts in an argon atmosphere in the retort, however furnace can be used without the retort. Excellent condition, currently installed and in operation.

**Asking Price \$80,000 USD**

<https://themonty.com/project/itemb458-noble-furnaces-box-furnace/>

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## **Item#BOX425 Lindberg Box Furnace**

Manufactured by Lindberg. Working dimensions of 42" high x 48" wide x 14'-0" long. Electrically heated 480/3/60, 160 KW. Operating temperature of 2000F. Temperature Controls: Free standing enclosed panel with updated Honeywell controls, including circular chart recorder, SCR controls, back up contactors and step down transformers for the heating elements. Description & Features: Fiber lined. Heated by Nichrome ribbon heating elements on both side walls. Two zones of control. Air cylinder operated door. Includes motor driven load/unload system. 8000 pound capacity. Originally installed at Boeing. Condition: Good. Vendor will repair the back wall, replace all broken element hanger modules and provide and install serviceable heating elements.

**Asking Price \$85,000 USD**

<https://themonty.com/project/itemb425-lindberg-box-furnace/>

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## **Item#BOX397 Drever Atmosphere Box Furnaces**

"Lift-Off" Atmosphere Box Furnaces (2 available). Manufactured by Drever. Effective working dimensions of 10'6" Wide x 35' Long x 6' High. Gas fired- 12,000,000 BTU/Hr. Max. Operating temperature of 1450F. Description; Ceramic Fiber Lined, Vertical Rising Atmosphere "Lift-Off" Furnace complete with (26) U-Shaped Radiant Tubes, North American Burner System, (4) Top-Mounted Alloy

Circulating Fans, (4) Zones of Control, Stationary Hearth, "Knife-Edge" Atmosphere Seal, and Hydraulic Lifting Cylinders on each end of furnace. Furnace is capable of 100,000 lb. loads. Instrumentation; Free-Standing Control Panel with Honeywell PLC Digital Temperature Controller, and Honeywell Flame Safety System. Very good condition. Overall dimensions of 15'11" Wide x 41' Long x 13'6" High. Approximate weight 70,000 pounds. Units each can hold up to 100,000# loads and were used prior for tempering/normalizing wire rod and bar stock. Both of these have top mounted recirculating fans and are "atmosphere capable", good for FNC work.

**Asking Price \$325,000 USD Each**

<https://themonty.com/project/itemb397-drever-atmosphere-box-furnaces/>

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## **Item#BOX374 R&G Services Atmosphere Box Furnace**

Atmosphere Box Furnace. Manufacturer: R&G Services, Inc. Inside Dimensions: 18" high x 32" wide x 36" deep. Heated: Electric, 230/3/60, 60 KW. Temperature: 2100 deg. F Model Number: EB-183236 Serial Number: 77021 Temperature Controls: Updated indicating controller and overtemp. Description & Features: Air operated vertical rising door. Slanted face plate. Brick lined with silicon carbide hearth. Heated by heavy Nichrome ribbon heating elements. Atmosphere inlet and burn-off. Flame curtain with controls and safeties. Condition: Very good. Furnace will be cleaned & painted, repaired as necessary, checked out & test fired prior to shipment.

**Asking Price \$18,000 USD**

<https://themonty.com/project/itemb374-rg-services-atmosphere-box-furnace/>

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# **CONTINUOUS FURNACES**

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## **Item#C359 Rogers Engineering Belt Temper/Anneal Furnace**

Serial Number CC-3977-0. Natural gas fired mesh belt temper/anneal furnace. Operating temperature of 1700F. 3.8 million BTU's/hour. Voltage: 480/3/60. Work Area: 60"W x 32'L heated length. External dimensions of 10'W x 11'H x 40'L – Approximately. Controls: Complete with Honeywell UDC digital controls. Mesh belt furnace with four (4) zones of control and forced cooling. Built in 2000. Excellent condition.

**Asking Price \$350,000 USD**

<https://themonty.com/project/itemc359-rogers-engineering-belt-temper-anneal-furnace/>

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## **Item#C358 Lindberg Rotary Retort Austempering Line (AUSTRALIA)**

This is a complete Lindberg rotary retort austemper line consisting of rotary retort pre-wash, high heat rotary retort furnace, salt quench tank, rinse/dry system and Endothermic Generator.

- Pre wash
- High heat furnace has a capacity of 300 pounds/hour, retort is 9' long with three zones of control. Operating temperature of 975Celcius.
- Salt quench tank with an operating temperature of up to 400 celcius.
- Rinse tank with dryer at end of line.
- System is installed but not in operation. Was used for processing pins.
- Mains are run off 415V and control is run off 240V.

- System is complete and in good condition.
- Located at a captive manufacturer in Australia

### **Best Offer**

<https://themonty.com/project/itemc358-lindberg-rotary-retort-austempering-line-australia/>

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## **Item#C357 Holcroft Direct Fired Roller Hearth**

Manufacturer: Holcroft

Category: Roller Hearth Furnace

Type: Direct Fired Roller Hearth

Heated: Natural Gas – 5.0 MBTU's/Hour

Model Number: Roller Hearth

Serial Number: CJ-4142

Max. Temperature: 1600°F

Voltage: 460/3/60

Work Area: 104"W x 24"H x 51'L Heated Length

External Dimensions: 13'10"W 15'H x 65'L – Approx

Controls: Mounted and wired in a free standing panel includes all necessary temperature controls, burner flame safeties, motor starters etc. for proper operation.

Description: This furnace has a 6'L load vestibule and a 6'L unload vestibule. Furnace has 5" diameter rolls on 16" centers with four (4) water cooled roof mounted axial type fans for excellent temperature uniformity. Furnace insulation consists of ceramic fiber in walls and roof with "IFB" in the floor. There are a total of twelve (12) North American Burners model 6422-3 and 6422-2. This furnace includes approx. (36) 48" x 46" trays and corrugated tubs, return conveyor w/cooling station. Drawings are included with this furnace.

Condition: Very Good

**Asking Price \$250,000 USD**

<https://themonty.com/project/itemc357-holcroft-direct-fired-roller-hearth/>

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## **Item#C356 CM High Temperature Pusher Furnace**

Manufacturer: CM Furnace

Category: Pusher Furnace

Type: High Temperature Pusher Furnace

Heated: Electric

Model Number: 344-36-3Z

Serial Number: 0200029 (2002)

Max. Temperature: 1700°C

Voltage: 480/3/60/30 kW

Work Area: 4"w x 4"h x 36" heated 3 Zone

External Dimensions: 4'W x 6'H x 11'L

Controls: Controls mounted in an enclosure attached to the furnace frame. Flange mounted disconnect handle operates the 40 amp circuit breaker. 3 Zone control with 3 Honeywell UDC 3300 microprocessor based temperature controllers, 3 Eurotherm digital high limit controls, Eurotherm cooling controller are flush mounted in the door of the enclosure. Also in the door are 3 percent meters for voltage to the heating elements and 3 percent meters indicating element amp draw, an Eagle purge timer and control switches and process indicating lights. Allen Bradley Micrologix 1000 programmable logic controller inside enclosure.

Description: Inclined front door, air operated with foot pedal operator. Atmosphere burn-off at the entry. protective atmosphere flush chamber followed by a 24" long cooling zone. Manually operated inner door prior to the entry vestibule. 3 zone heating chamber with Moly wound alumina oxide "D" shaped

muffle. Heated section is lined with high alumina insulation package. Protective atmospheres enter the muffle through the rear. Standard gas panel includes all needed pressure switches, flow meters, pressure regulators, solenoid for processing atmosphere and safety Nitrogen purge. Product is manually loaded and unloaded.

Condition: Very Good

**Asking Price \$62,500 USD**

<https://themonty.com/project/itemc356-cm-high-temperature-pusher-furnace/>

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## **Item#C355 Despatch Solvent Rated Conveyor Oven**

Manufacturer: Despatch

Category: Continuous Ovens

Type: Solvent Rated Conveyor Oven

Heated: Electric

Model Number: PCC30x120x7-1E

Serial Number: 165237

Max. Temperature: 500°F

Voltage: 480/3/60/32 kW

Work Area: 30"W x 6"H x 10'L

External Dimensions: 64"W x 8'8"H x 14'2)L

Controls: Controls are located in an enclosure attached to the side of the oven. There is a West model 1422 digital temperature controller, a West model 1162 high limit and a Partlow MRC 7000 round chart temperature recorder are flush mounted in the door of the enclosure. Control switches with indicating lights are also flush mounted in the enclosure door. The enclosure also has a flange mounted fused disconnect handle. Solid state relays, high limit contactor, motor starters, fuses etc. are mounted inside the enclosure.

Description: Variable speed flat wire conveyor belt with 1" x 1" openings. The belt drive has a DC motor / speed reducer combination with speed control potentiometer and digital speed readout. There is a 24" long load table at the entrance and a 24" long unload table. Aluminized steel interior with an access door on the side. Coiled style heating elements are located above the work chamber. Circulating fan is mounted through the roof. Heated air is circulated in a "top – down" airflow pattern through adjustable louvered air ducts and down through the belt for good uniform heating. A powered exhaust fan is mounted on top of the oven. \*\* Rated for use with some solvents (.041 GPH of MEK @230 F.)

Condition: Excellent

**Asking Price \$17,500 USD**

<https://themonty.com/project/itemc355-despatch-solvent-rated-conveyor-oven/>

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## **Item#C354 MOCO Thermal Industries Conveyor Oven**

Manufacturer: MOCO Thermal Industries

Category: Continuous Ovens

Type: Conveyor Oven

Heated: Natural Gas – 1 MBTU Eclipse Burner

Model Number: Conveyor Oven

Serial Number: 7147

Max. Temperature: 500°F

Voltage: 480/3/60

Work Area: 24"W x 18"H x 10'L

External Dimensions: 8'w x 12'h x 14' long

Controls: Mounted and wired in a NEMA type electrical enclosure with fused disconnect. Enclosure is mounted on the left hand side closest to the charge end. Mounted to the front face of the enclosure includes a Honeywell UDC digital temperature controller and a Honeywell UDC digital high limit controller. Push

buttons and signal lights for control power, exhaust fan, recirc. fan, combustion air blower, conveyor drive, purging/purge complete lights etc. There is a Altivar AC variable speed drive for conveyor speed. Protection Controls flame safety with spark ignition and flame rod.

Description: This oven has a flat wire conveyor belt with a 24" long charge end and a 24" long discharge end. Oven also has two (2) access doors, one (1) on each side of the oven. Top mounted combustion chamber with recirculating fan, Eclipse AH burner and powered exhauster.

Condition: Very Good

**Asking Price \$24,500 USD**

<https://themonty.com/project/itemc354-moco-thermal-industries-conveyor-oven/>

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## **Item#C353 Mesh belt furnace SOLO 322-50/300**

Loading chassis, heating zone with exit chimney, colling zone with exit chimney, unloading chassis, drive system with mesh belt, oximeter, dew point measuring devise, EUROTHERM controller type 6180, gas distribution cabinet, electric control cabinet with management system, type HYDROBELT

Technical data

- Year of manufaturing : 2011
- Serial N° : 9114
- Maximum temperature : 850°C
- Operating voltage : 3 x 400 V – 50 Hz / TN-C
- Total power input : 124 kW
- Heating power : 120 kW
- Heated length : 3000 mm
- Cooled length : 6000 mm
- Power per heating zone : 3x40 kW

- Chanel section : 520 x 140 mm
- Usefull height : 120 mm
- Conveyor belt width : 500 mm
- Belt speed : 10-60 cm/min
- External dimensions : L 14100 mm x l 1300 mm x H 1920 mm

Excellent condition, well-maintained. With manufacturer's instruction manual.

Currently located in Switzerland : Porrentruy (2900)

**Asking Price € 165'000 Euro**

<https://themonty.com/project/itemc353-mesh-belt-furnace-solo-322-50-300/>

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## **Item#C352 Can Eng Mesh Belt Furnace**

This is a complete mesh belt furnace line consisting of;

- -Metro Scale vibratory loading system
- -Pre Wash
- -High Heat Furnace. 36" Wide belt with 3" clearance over belt. 500 pounds per hour capacity. Gas fired with eclipse recuperated burners, 3 heating zones, 1750 Deg F, 9 lbs/ft<sup>2</sup>, endothermic atmosphere, underground oil quench tank. 797,000 BTU/hour input. Brick work in very good condition.
- -Post Wash
- -Mesh belt temper furnace. 700F operating temperature. 500 pounds per hour. Gas heated.

Line is installed, complete and operational but not currently in production. Spare parts including a mesh belt are included. Built in 2000. Overall in very good condition. Perfect for processing fasteners.

**Asking Price \$150,000 USD**

<https://themonty.com/project/itemc352-can-eng-mesh-belt-furnace/>

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## **Item#C350 BTU Mesh Belt Furnace**

Manufactured by BTU Engineering in Massachusetts, USA this is a mesh belt furnace/dryer, Model TFF141-590N48GT. Belt is 9" wide with 2 ½" clearance

over belt. Electrically heated with 19' of heating and a 17' dryer. Operating temperature of the furnace is 1000C and dryer is 200C. Dryer has 4 zones of control and furnace has 5 zones of control. Currently installed and in operation. Very good condition.

**Asking Price \$5,000 USD**

<https://themonty.com/project/itemc350-btu-mesh-belt-furnace/>

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## **Item#C349 Rotary Hearth Furnace & Press Quench System Available (EUROPE)**

Located in Spain we have available an electrically heated Aichelin rotary hearth furnace, HESS quench press and continuous belt washer also made by Aichelin. Rotary hearth furnace was producing 50Kg/hour of parts but based upon the heating power of 100Kw the furnace is capable of 350-400Kg/hour. Operating temperature of 800-900C, maximum temperature 950C. Atmosphere N2 + CH3OH. Controller with a CO-CO2 analyzer with a Carb-o-Mat controller. HESS press quench system can handle parts to a maximum diameter of 360mm. The entire system was built in 1990 for a major auto parts supplier but saw very limited use, 16,400 hours (approximately 2-3 years) production in total. Currently in indoor storage. **Asking price for the entire system is 150.000€.**

Also available is an Ipsen batch temper furnace model Ipsen DL 10 G with working dimensions of 760x1220x760mm. Gas heated with Ipsen Burners and kromschroeder control. Maximum operating temperature of 450C. Built in 1994, very good condition. **Asking 22.000€**

An Ipsen batch washer is also available, model Model: WSD 10 G. Built in 1994. **Asking Price: 8.500€**

<https://themonty.com/project/itemc349-rotary-hearth-furnace-press-quench-system-available-europe/>

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## **Item#C348 BTU Belt Furnace 1100°C**

Manufactured by BTU this is a high temperature mesh belt furnace.

Model BTU TFCA94-6-54E48GT, Serial Number RFMT-1. Max Temperature of 1100°C. Hydrogen Capabilities, Belt is 9" wide with 4" clearance over the belt. 6 zones of control with a heated length of 54" heat and a 48" long cool zone. Gas Tight. Excellent condition.

**Asking Price: \$69,500 USD**

<https://themonty.com/project/itemc348-btu-belt-furnace-1100c/>

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## **Item#C347 SierraTherm Series 2500**

SierraTherm Series 2500. Vintage: 2000. Model: 9K9-117C91-9NCHS. Brazing and Copper Firing Conveyor Furnace. One Owner – company closed due to retirement of owner bought new from SierraTherm. Full Manuals included. General Specifications. Belt Width: 9 inches. Heated Length: 117 inches. Cooling Length: 91 inches. Product Clearance above belt: 1" with 2" baffles. Temperature: 1050 degrees C. Atmosphere: N2 or H2. Input Power: 200/240VAC. 3Ph, 3 Wire, 50/60 Hz, 46kVA max. Zones Heated: Nine [9]. Entry / Exit Tables: 24". Overall Length 292 inches. Height: 50 inches. Width: 44 Inches. Conveyor Height: 36 inches. Leveling Range: +/-1. Belt Speed Range minimum: 1.0/min. Belt Speed Range maximum: 10.0/min. Weight approximate: 4000 lbs

**Asking Price: \$89,500 USD**

<https://themonty.com/project/itemc347-sierratherm-series-2500/>

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## **Item#C342 Two CM High Temperature Pusher Furnaces**

Each system includes ...Common frame with power and control components. Heavy gage welded construction. Atmosphere containment doors with protective atmosphere flushing. "Moly" elements wound a ceramic tube muffle. Alumina brick insulation. Water jacketed cooling section. Microprocessor temperature controller. Phase angle fired SCR control units. Overtemperature protection controller. Type "C" thermocouples.

Model 345-48-3Z. 4" opening x 5" wide x 48" long heating chamber, 3 zones. 54 KW, 480/3/60. Hydrogen/Nitrogen atmosphere with safety system. Max. temperature rating: 1700 deg.C.

**Asking Price: \$23,450.00**

Model 366-48-1Z. 6" opening x 6" wide x 48" long heating chamber, single zone. 45 KW, 480/3/60. Hydrogen/Nitrogen atmosphere with safety system. Max. temperature rating: 1700 deg.C.

**Asking Price: \$22,550.00**

<https://themonty.com/project/itemc342-two-cm-high-temperature-pusher-furnaces/>

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## **Item#C341 CI Hayes Mesh Belt Furnace**

Used CI Hayes Conveyor Type Muffle Furnace. Super Solitaire 27. NH3 & Nitrogen Inlet Flowmeters. Combustible atmosphere system with N2 purge. Inconel Muffle with internal hearth plates. Furnace (6) Nichrome Ribbon Elements. AD150 (6) Nichrome Ribbon Elements 314SS Mesh Belt rated 3# per linear foot loading @ 2000F. Type: Model LAC-MB-030627-AD. Hot Zone: 27" Long Heated Length, 6" wide Mesh Belt, 3" Work Height. Overall Dim.: Approx 2-1/2' Wide x 5' High x 20' Long. Max Temp.: 2100F (1150C) Continuous at 2000 deg.F Elec Utilities: Furnace 18kw, Contactor Power Switching, Wired 240/3/60. AD150 15kw, Contactor Power Switching, Wired 240/3/60 Controls: Honeywell Temp Control & Honeywell Overtemp Control, Both. Furnace and 150 CFH Ammonia Dissociator. Rear mounted Belt Drive with Indexing Control. Digital speed readout 0-20ipm. Extended Front Entrance Tunnel with Nitrogen Curtains and Burn-off Stack.

**Asking Price 18,000 USD Loaded On A Truck**

<https://themonty.com/project/itemc341-ci-hayes-mesh-belt-furnace/>

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## **Item#C339 Can Eng Mesh Belt Furnace**

*Operating temp. to 2050 F. Work zone: 18" wide x 12" high x 132" heated, 33' stainless steel cooling section. Power: 575 volt, 3 phase. 176 KW. 2 zone temperature control. Brick lined chamber. Silicon carbide heating elements above and under the belt. Silicon carbide hearth tiles. 2 tap transformers. Approximate overall size: 8' wide x 7' high x 60' long.*

**Asking Price 14,900 USD**

<https://themonty.com/project/itemc339-can-eng-mesh-belt-furnace/>

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## **Item# C337 Mesh Belt Furnace Line, 4,000 Pounds/Hour**

Manufactured by Atmosphere Furnace Company in 1995 this is a complete mesh belt furnace line designed for hardening of fasteners. Gas fired. 4,000 pounds per hour capacity. Line included Metro Scale loading system, hydraulic bin dumper, vibratory shaker and scale, belt width 60". Oil quench and temper. Line is complete, installed but has not been run recently. Very good condition. More details and photos to come.

**Asking Price \$250,000 USD**

<https://themonty.com/project/item-c338-mesh-belt-furnace-line-4000-pounds-hour/>

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## **Item#C324 C.I. Hayes Mesh Belt Furnace**

LAC Type. Work Zone: 12" Wide Belt, 12" High work area, 12' heat, 12' cool with 3 zones of temperature control. 1120C maximum temperature (2000F operating temperature). Power: 220V, 75KW, 212Amp, 60Hz , 3Ph. "Air Products" Gas Mixing Panel (N2, H2). Footprint: 9'W x 54'L (90'L Belt), 10'H + ductwork. Extra set of cooling muffles.

**Asking Price \$49,500 USD**

<https://themonty.com/project/itemc324-c-i-hayes-mesh-belt-furnace/>

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## **Item#C323 Aichelin Cast Link Furnace Line**

The line consists of a loading table, cast link belt hardening furnace, oil quench, cross conveyor, post wash and two continuous tempering furnaces. High belt is 24" wide X 300" long with a capacity of 336 Kg/h. Nitrogen/Methanol atmosphere. Electrically heated 300 kW. Operating temperature of 1650F. Quench oil tank holds 7,000 litres. Air/oil quench oil cooler. Post wash has oil skimmer. Both tempering furnaces are electrically heated, 57 kW each. Belt widths 20" X 250" long. Maximum operating temperature of 575F. Installed in 2005 and used for processing automotive bearings. Recently removed from operation and now in indoor storage. Excellent condition.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemc323-aichelin-cast-link-furnace-line/>

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## **Item#C314 Wellman Roller Hearth Furnace**

Manufactured by Wellman in 1982. Model #AL-81-180 RH, S/N 180. Working dimensions of 60" Wide x 42' Long x 14" High – 4800#/HR. Electric – 480/3/60 – 469 KW (over (4) Zones of Control). Operating temperature of 1650° F. Brick Lined Atmosphere Capable Roller Hearth Furnace complete with (4) Zones of Control, Heating Elements above and below Rolls, Transformers, 25' Slow Cool Chamber (Air Cooled with Fans), and Variable Speed Drive. Free Standing Control Panels with Watlow Digital Controllers ((1) Per Zone), Watlow High Limits, and SCR Power Controls. Overall dimensions; Entrance Chamber: 12'Wide x 14' Long x 10' 6" High. High Heat Chamber: 10' 6" Wide x 30' Long x 10' 6" High. Cooling Zone: 12' Wide x 27' Long x 10' 6" High. Approximate weight 80,000 pounds. Very good condition.

**Asking Price \$225,000 USD**

<https://themonty.com/project/itemc314-wellman-roller-hearth-furnace/>

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## **Item#C301 Rogers Engineering Cast Link Furnace Line**

Manufactured by Rogers Engineering 4,000 pounds/hour cast link belt furnace line consisting of a 1750F high heat furnace and 1700F temper furnace. Serial # CC-3977-0 (1997). High Heat Furnace: 48"W Omega Cast Link Belt, 4" pitch, 3" sides. Furnace has a 30'L heating section. Four (4) zones of control with three (3) roof mounted in the last three (3) zones. Maximum operating temperature of the hardening furnace is 1750°F. Furnace is radiant tube heated with recuperators. Furnace is currently set up for Endothermic w/Enriching Natural Gas & Air. Total BTU's for hardeneing furnace is 3,180,000 BTU/HR. Controls; All mounted in a free standing panel includes Allen Bradley PLC w/HMI Touchscreen, Honeywell UDC Digital Temperature Controls, SSi Carbon Controls. Voltage 480/3/60/200kW.

Tempering/Anneal Furnace: 60"W mesh belt with support rollers. Furnace has a 35'L heating section. Four (4) zones of control with four (4) roof mounted fans. Maximum operating temperature is 1700°F. Total BTU's for the tempering/annealing furnace 3,790,000 BTU/HR. Please note that this furnace has two (2) different modes of operation. Click on 'PDF" below for more information on the different modes of operation.

The sequence of this furnace is as follows:

- Load parts into pre-wash dump loader
- Pre-Wash, 190°F, Gas Heat
- Parts vibrate onto mesh (soft load) then onto cast link belt.
- High heat cycle
- Quench cycle, 200°F, Gas Heat, 8000 Gallon
- Wash cycle, 190°F, Gas Heat
- Temper cycle
- Oil blackening cycle

Includes:

- 5600 CFH Air Cooled Endothermic Gas Generator
- SBS Air to Oil Heat Exchanger which consists of three (3) 5 H.P. fans.-

Manuals & Drawings

Very good condition, available immediately.

**Asking Price \$650,000 USD**

<https://themonty.com/project/itemc301-rogers-engineering-cast-link-furnace-line/>

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## **Item#C269 C.I. Hayes Mesh Belt Furnace**

Working dimensions of 5" over belt, 12" wide X 120" of heated length. Electrically heated 230/3/60, operating temperature of 2100F. Model LAC. Temperature controls are new state of the art, control panel with Honeywell solid state digital readout controller and overtemp for each of three zones, includes volt and amp meters. Full alloy muffle in hot zone. 20' long sealed water jacketed cooling. Globar heating elements over and under the belt. (3) zones of control. (4) argon flowmeters. Dayton AC inverter provides adjustable belt speed. Updated SCR controls. Muffle and belt are new. Very good condition.

**Asking Price \$29,000 USD**

<https://themonty.com/project/itemc269-c-i-hayes-mesh-belt-furnace/>

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## DRAW/TEMPER OVENS

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

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### **Item #T383 Despatch Recirculating Walk in Oven**

Manufactured by Despatch this is a gas fired walk in oven. Model #V-41, Serial Number 53101. Operating temperature of 500F-250,000 BTU's. Working dimensions of 66"high x 54"wide x 68"deep.

Temperature Controls: Updated solid state controls. Tempco CEC-4100 controller. Honeywell overtemp.

Description & Features: Double swing open doors, horizontal air flow, insulated floor with tracks for a cart, powered exhaust blower, top mounted combustion and fan chamber. Atmospheric type burner system. Complete combustion controls and safeties. Oven will be cleaned and painted, checked out and test fired prior to shipment. Excellent condition.

**Asking \$16,500.00 USD**

<https://themonty.com/project/item-t383-despatch-recirculating-walk-in-oven/>

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### **Item#T382 Wisconsin Oven – 8'W x 14'D x 8'H**

Wisconsin Oven model EWN-814-8G, 500F, 8'W x 14'D x 8'H, gas fired with an 800,000 BTU burner, 480/3, vertical door one end, digital controller, disconnect switch, hi-limit, process timer, aluminized steel interior, adjustable louvers, never been run, ready for immediate shipment, two available.

**Asking Price \$47,500 USD Each**

<https://themonty.com/project/itemt382-wisconsin-oven-8w-x-14d-x-8h/>

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### **Item#T381 Cabinet Oven (2 Available)**

Manufacturer: Blue M

Category: Cabinet

Type: Cabinet Oven

Heated: Electric

Model Number: DC-606-G-MP550

Serial Number: DC-9172

Max. Temperature: 600°F

Voltage: 480/3/60/24 kW/34 F.L.A.

Work Area: 36"W x 60"H x 48"L

External Dimensions: 80"W x 93"H x 63)L

Controls: Controls are located in a small enclosure attached to the right hand side. Yokogawa Pro 550 digital programmable temperature controller and a Partlow high limit along with high limit contactor, motor starter, solid state power relays, fuses relays etc. are mounted inside the enclosure. Fused disconnect is mounted on the back side of the electrical enclosure.

Description: This oven has a single swing door with silicon rubber gasket and cam action closure that latches in three places for a good seal. The interior of the oven is constructed of stainless steel. The heating elements and direct driven circulating fan are in a separate compartment above the work area. The heated air is circulated horizontally across the work area through perforated panels on each side. There are nine (9) shelf brackets, three (3) shelves are included.

Shelf brackets are on 6" centers. A manual is included with this oven.

Condition: Excellent – Tested

Availability: Immediate

**Asking Price \$14,500 USD**

<https://themonty.com/project/itemt381-cabinet-oven-2-available/>

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## **Item#T380 Gruenberg Walk In Oven 450F**

ID: 68" wide x 72" deep x 72" high, electric—480/3/60—48kw; 450F recirculating complete with insulated floor, Honeywell digital controls, double swing out front doors. Taken out of production 3 months ago.

**Asking Price \$5,000 USD**

<https://themonty.com/project/itemt380-gruenberg-walk-in-oven-450f/>

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## **Item#T379 Grieve Oven 36" x 36" x 36"**

Manufacturer: Grieve

Inside Dimensions: 36"high x 36"wide x 36"deep

Heated: Electric 460/3/60, 33 Amps, 24 KW  
Temperature: 1250 deg.F  
Model Number: AB-1250  
Serial Number: 95862A1008  
Temperature Controls: Partlow Circular Chart Recorder MRC5000.  
Watlow Control. Partlow 1161 overtemp.  
Description & Features: 1 HP fan motor. Air flow switch. Double swing-open doors. Front to back horizontal air flow. Stainless steel interior. Provisions for 5 shelves, 4 included. Checked out and operational.  
Condition: Excellent

**Asking Price \$18,500 USD**

<https://themonty.com/project/itemt379-grieve-oven-36-x-36-x-36/>

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## **Item#T378 Despatch Recirculating Walk In Oven**

Inside Dimensions: 66"high x 54"wide x 68"deep  
Heated: Gas fired. 250,000 BTU  
Temperature: 500 deg.F  
Model Number: V-41  
Serial Number: 53101  
Temperature Controls: Updated solid state controls.  
Tempco CEC-4100 controller. Honeywell overtemp.  
Description & Features: Double swing open doors, horizontal air flow, insulated floor with tracks for a cart, powered exhaust blower, top mounted combustion and fan chamber. Atmospheric type burner system. Complete combustion controls and safeties. Oven will be cleaned and painted, checked out and test fired prior to shipment.

**Asking Price \$16,500 USD**

<https://themonty.com/project/itemt378-despatch-recirculating-walk-in-oven/>

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## **Item#T377 Despatch Aluminum Horizontal Heat Treat Equipment**

Manufactured by Despatch Industries this is a horizontal quench aluminum furnace with working dimensions of 40" X 40" X 40". Serial number 162815.

Normal operating temperature 1000F, maximum operating temperature of 1050F. Electrically heated, heater capacity 125KW. Control voltage 120V-1PH-60HZ. Designed to heat treat aluminum parts for BF Goodrich. Rated for 500 pounds per load with a heating time of 30 minutes. Complete and in very good condition.

**Asking Price \$99,000 USD**

<https://themonty.com/project/dispatch-aluminum-horizontal-heat-treat-equipment/>

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## **Item#T375 Grieve Walk-In Oven 5'W x 5'L x 6'H**

Manufacturer: Grieve

Type: Walk-In Oven with Cart

Model: WTH 566-750

Maximum Temperature: 750F

Work Zone: 5'W x 5'L x 6'H

Footprint: 7'W x 7'L x 9'H

Manuals and electrical schematics included

Power: 460V, 84A, 3Ph, 60Hz

Heat Input: 60KW

Fans: Exhaust fan and circulation fan (largest motor 5HP)

Controls: Honeywell UDC 2300 Temperature Controller and analog high limit controller

Uniformity: Appears to have been designed as +/-10F, was last used as if it was +/-25F

Condition: Excellent

**Asking Price \$24,500 USD**

<https://themonty.com/project/itemt375-grieve-walk-in-oven/>

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## **Item#T374 Pacific Scientific 30" x 48" x 30" Electric Temper**

Pacific Scientific 30" x 48" x 30" Electric Temper. Model PKMD 100-E. Serial number: 662-0208P . Heating: Electrically. Power Req: 65 KW, 460 Volt, 3 Phase. Max Temperature: 1450°F.

**Asking Price \$15,000 USD**

<https://themonty.com/project/itemt374-pacific-scientific-30-x-48-x-30-electric-temper/>

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## **Item#T373 Pacific Scientific 30" x 48" x 30" Electric Temper**

Pacific Scientific 30" x 48" x 30" Electric Temper. Model PKMD 100-E. Serial number: 662-0420. Heating: Electrically. Power Req: 65 KW, 460 Volt, 3 Phase. Max Temperature: 1450°F. Nitrogen Capable.

**Asking Price \$14,500 USD**

<https://themonty.com/project/itemt373-pacific-scientific-30-x-48-x-30-electric-temper/>

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## **Item#T372 Selas (Pacific Scientific).**

Model PKMD 100-E Selas (Pacific Scientific). Model PKMD 100-E, Serial number 662-0585. Working dimensions: 30"X 48" X 30". Max Temp: 1450°F. 65 KW, 460 Volt, 3 Phase. Very good condition.

**Asking Price \$17,500 USD**

<https://themonty.com/project/itemt372-selas-pacific-scientific-model-pkmd-100-e/>

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## **Item#T371 Recirculating Box Type Draw Oven**

Lindberg Model 152418-E12 recirculating box type draw oven. Working dimensions of 18" high X 15" wide X 24" deep. Electrically heated 230/3/60, operating temperature of 1250F. This is a standard Lindberg "Cyclone" design . Coiled Nichrome heating elements are housed in a separate chamber. A high velocity paddle wheel fan delivers the heat to the work chamber and provides for good uniformity. Plug type swing open door. Brick lined door, stainless steel interior. Provisions for two shelves, one shelf included. Furnace will be checked out and reconditioned, cleaned, painted and test fired. Includes a 30 day warranty. Very good condition. ALSO AVAILABLE ARE 4 OTHER TOOL ROOM BOX DRAWS IN STOCK.

**Asking Price \$5,950 USD**

<https://themonty.com/project/itemt371-recirculating-box-type-draw-oven/>

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## **Item#T368 Surface Combustion Super 30 Temper**

Manufactured by Surface Combustion in 1972 this is an electrically heated temper with working dimensions of 30" X 48" X 30". Serial Number BC-39686. Maximum operating temperature of 1250F. Currently installed but not in use. Complete and in good condition.

**Asking Price \$29,000 USD**

<https://themonty.com/project/itemt368-surface-combustion-super-30-temper/>

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## **Item#T360 Wisconsin Oven**

Model SBH-222, 650F, inside dimensions 2'W x 2'D x 2'H, horizontal airflow, Allen Bradley Panel View Plus 600, hi-limit, door switch, audible/visual alarm, 240/3 with 12 KW heater, Honeywell chart recorder, 2 shelves.

**Asking Price \$7,900 USD**

<https://themonty.com/project/itemt360-wisconsin-oven/>

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## **Item#T359 Seco Warwick Vacuum Temper Furnace**

Model VTR-5050/48. Serial Number 586/2005. Purchased 3/21/2006. Work Zone Dimensions, 36W X 48D X 24H. Originally qualified for 900°F to 1260°F with +/- 10°F uniformity. Vacuum pump is Stokes Model 212-11, Blower is Stokes Model 310-41. The operating system is Wonderware Intouch. Internal circulation fan. 460 VAC 3 phase. The buyer will be responsible for removal. The furnace will be available for removal in April 2019. It is currently still in operation.

**Asking Price \$50,000 USD Or Best Offer!**

<https://themonty.com/project/itemt359-seco-warwick-temper-furnace/>

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## **Item#T358 Wisconsin Oven Like New (2 Available)**

Wisconsin Oven Model EWN-55-5G8, 800F, 5'W x 50'D x 6'H, overall 9'6" W x 11'D x 11'H, 10HP/7000CFM recirculating fan, combination airflow, adjustable louvers, airflow switch, 600 CFM exhaust, Eclipse 450,000BTU burner, UL listed control panel, Honeywell recorder, Honeywell programmer, digital hi-limit, disconnect switch, vertical rise doors on both ends, insulated floor, exhaust hood. Excellent Condition.

**Asking Price \$29,500 USD Each**

## **Item#T356 Wisconsin Oven Temper Furnace**

Wisconsin Oven Temper Furnace. Recirculating gas fired batch temper with air operated vertical lift doors on each end. Eclipse package burner with roof mounted recirculating fan distributes heated air in a combination air flow pattern. Roller rail hearth with chain guide. Furnace includes two (2) scissor lift tables. Manuals & drawings are included with this furnace. Natural Gas – 1 MBTU's/Hour. Model # SDB-6616-10G and serial # 033899307. Max operating temperature is 1000°F with a voltage of 480/3/60/16 Amps. Working dimensions of 36"W x 36"H x 96"L with external dimensions of 96"W x 13'4"H assembled (10'6"H shipping) x 11'L. Controls mounted and wired in an enclosure with fused disconnect attached to the side of the furnace. Temperature controllers consist of a digital Barber Colman 560 digital for temperature and a Barber Colman digital "Limitrol" 75L high limit. ATC process timer to control heating cycle and Barber Colman digital round chart recorder. Allen Bradley switches for control power, circulation fan, ignition and gas valve reset. Signal lights for control power, air flow, high/low gas pressure, purge, etc. Eclipse package burner with Honeywell flame safety, UV scanner and spark ignition.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemt356-wisconsin-oven-temper-furnace/>

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## **Item#T349 Eclipse Recirculating Box Furnace**

Recirculating Box Type Draw Furnace. Manufacturer: Eclipse. Inside Dimensions: 30"high x 42"wide x 96"deep. Heated: Gas fired. Temperature: 1250 deg.F. Model Number: Box Draw. Serial Number: 3424-00773. Temperature Controls: Updated controls, Honeywell indicating controller and overtemp, circular chart recorder. Description & Features: Vertical lift air operated door. Brick lined. Alloy roller rail hearth. Seven adjustable roof baffles. Rear combustion chamber with atmospheric burner and high velocity recirculating fan. Complete combustion controls and safeties. Includes manual load table. Condition: Very Good, Operational.

**Asking Price \$39,500 USD**

## Item#T340 Safed/Borel Annealing Furnace

Safed/Borel Annealing Furnace built in 1991. The working dimensions consist of: Diameter 400 mm, Height 500 mm. External Dimensions: 1800 mm x 1767 mm x 2412 mm. Maximum Temperature: 650 C with a maximum load capacity of 100 kg (not including baskets). Main voltage is 3 x 400V / 50 Hz, Control voltage is 230V / 24V. This setup includes a Eurotherm programmer, threshold controller, recorder, programmable clock, timing relay, control for water flow, vacuum pump, pressure reducer, and fire engine. Located in France.

For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)

<https://themonty.com/project/itemt340-safed-borel-annealing-furnace/>

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## Item#T335 Despatch Temper

Batch Oven 37"H X 37"W X 25"D. Batch type recirculating oven manufactured by Despatch, Model V-29-STD. Inside dimensions of 37" high X 37" wide X 25" deep. Electrically heated 480/3/60, 12 KW. Operating temperature of 500F. Serial number 126552. Temperature Controls: Partlow indicating controller and Honeywell overtemp, timer. Double swing open doors. Side mounted recirculating fan. Adjustable horizontal air flow. Provisions for 12 shelves, 4 shelves included. Powered exhaust blower. Oven has been checked out and test fired and is ready for immediate shipment. Excellent condition.

Asking Price \$5,500 USD

<https://themonty.com/project/itemt335-despatch-temper/>

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## Item#T325 Despatch 3-Station Temper Furnace

Manufactured in 1980 by Despatch Industries, Inc. 3 Independently loaded and operated furnace stations with shared panel. Tops elevate off bases for loading and unloading. Work Zone: 22"W x 40"L x 25"H Each. Hearth Height: Estimated at 36-40" (Can measure for you). Max. Temperature: 850°F with a Uniformity of +/- 25°F (Center area of 12"W x 20"L x 10"H meets +/- 10°F). Electrically heated with a power of 490V/3Ph/60Hz. 3 West 4400 Temperature Contrl. & West 6700 Hi-Limit. (We can quote upgrade to new Super Systems, Inc. controls, if

desired.). Just rebuilt. New heating elements, new hearth ceramics, New stainless steel side panels, new paint.

**Asking Price \$20,000 USD**

<https://themonty.com/project/itemt325-despatch-3-station-temper-furnace/>

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## **Item#T320 Pifco Conveyor Oven**

Electrically heated 2 zone conveyor oven 480/3/60/144 kW. Maximum operating temperature of 600F. Work area; 72"W x 12"H x 25'L heated length. External dimensions 9'W x 10'H x 40'L – approx.. Controls; Mounted and wired in a free standing panel includes an Allen Bradley PLC with PanelView Plus 1000 touchscreen interface. Power to the heating elements are controlled through two (2) Allen Bradley "SCR" power controllers, one (1) for each zone. An Allen Bradley PowerFlex "VFD" controls oven conveyor belt speed. Standard two (2) zone electrically heated conveyor oven with a wire on edge belt. This oven has a 10'L load end and 8'L unload end with cooling. Access doors with "Brixon" door latches on both sides of oven and one in each heating chamber. Very good condition.

**Asking Price \$59,000 USD**

<https://themonty.com/project/itemt320-pifco-conveyor-oven/>

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## **Item#T318 Eisenmann Box Tempers (4 Available)**

*Large Box Tempering Ovens (4 available). Built by Eisenmann in 2002, Model # HN-FNC-002. Working dimensions of 108" Wide x 96" Deep x 64" High. Natural gas fired, 3.2 million BTU's per hour. Operating temperature of 1200F.*  
*Description; Stainless Steel Lined Recirculating Box Tempering Oven complete with Top-Mounted Alloy Recirculating Fan (20 HP – 13,000 CFM), Rear-Mounted Heater Box with Eclipse Burner System, Alloy Skid Hearth, Forced Cool Down Fan System (7,333 CFM), Vertical Rising Motor Driven Front Door, and Stationary Loading Table.*

Instrumentation; Free Standing Control Panel with Eurotherm Digital Set Point Programmable Temperature Controller, High Limit, Chessel Strip Chart Recorder, and Honeywell Flame Safety System.

OVERALL DIMENSIONS: Oven: 13' Wide x 20' Long x 17'8" High (includes Door Structure. (Shipping Dimensions: 12'6" Wide x 20' Long x 10'8" High). Loader: 9'6" Wide x 12" Long x 4' High. Approximate weight 20,000 pounds. Excellent condition, operational.

**Asking Price \$72,500 USD**

<https://themonty.com/project/itemt318-eisenmann-box-tempers-4-available/>

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## **Item#T303 Pifco Temper Furnace**

S/N 8177 built in 1988. Working dimensions of 126" long x 60" wide x 40" high. Overall dimensions of 13' x 11' x 11' high. Comes with load and unload discharge tables and combustion fan. Maximum operating temperature 950 deg. F. Rated for 250 pound net weight x 37.4in long tray loaded every 15 minutes. Furnace holds three (3) trays. Approximate nineteen (19) minutes to operating temperature. Forty-five minutes in furnace @ 15 minute load cycle. Heated by one gas burner approximate rating 600,000 BTU/hour. Utilities required: 1000 BTU natural gas @ 5PSI, 480v 3Ph 60Hz. Water 80 deg. F maximum @ 20PSI. Compressed air 60PSIG minimum. Adequate drain for water. Good condition.

**Asking Price \$20,000 USD**

<https://themonty.com/project/itemt303-pifco-temper-furnace/>

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## **Item#T286 Lindberg Box Temper**

Model 11-7212048-G14, S/N 24947. Working dimensions of 72" wide X 120" long X 48" high. Gas fired with a maximum operating temperature of 1200F. Vertical lift-air operated door, brick lined, 5 course refractory hearth, alloy roof baffles, alloy side wall ducts, dual zone burners-roof mounted combustion chambers with dual belt driven fans. Free standing prewired control panel. Good condition.

**Asking Price \$65,000 USD**

<https://themonty.com/project/itemt286-lindberg-box-temper/>

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# **GENERATORS**

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

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## **Item#G200 Rogers Engineering Endothermic Generator 5600 CFH**

This is an air cooled endothermic gas generator with three (3) retorts and SBS cooler. Gas heated, Serial Number 3977. 5600 CFH capacity, 1950F operating temperature, Voltage 460/3/60. External Dimensions: 8'w x 13'H x 12'L – Approximately. Pumping system consists of Waukee pump with mixer. Built in 2000.

**Asking Price \$62,500 USD**

<https://themonty.com/project/rogers-engineering-endothermic-generator-5600-cfh/>

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## **Item#G199 2000 CFH Endothermic Generator New 2015**

Manufactured by Unitherm Industries in 2015. Model EG 2000, Serial Number 102113-2. 2,000 CFH capacity. Maximum operating temperature 2000F. Natural Gas fired. SSI atmosphere controls includes AC-20, Series 7 Temperature control, 7SL Hi Limit. Installed but not in use. Excellent condition. Last operated December 31/2018.

**Asking Price \$29,500 USD**

<https://themonty.com/project/itemg199-2000-cfh-endothermic-generator-new-2015/>

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## **Item#G197 Lindberg Ammonia Dissociator**

Manufactured by Lindberg. 1,000 CFH. Model Number: 16-1000-HYAM. Serial number 26004. Electrically heated, 460/3/60, 30 KW, 37.6 amps. Operating Temperature: 2000 deg.F. Temperature Controls: Honeywell indicating controller and overtemp. Standard Lindberg design with vertical sealed catalyst chamber. Ceramic fiber insulation. Nichrome heating elements. Air cooled heat exchanger. Includes pressure gauges, SSOV, Waukee DA flowmeter. Includes operating

manual and drawings. Very good condition. Unit is complete and guaranteed operational.

**Asking Price \$11,500 USD**

<https://themonty.com/project/itemg197-lindberg-ammonia-dissociator/>

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## **Item#G196 Surface Combustion Endo Generator**

Surface Combustion 5000 CFH Endo Generator. Serial number AC 42332-1A. Maximum temperature 1950F. Barber-Coleman controls with digital recorder and over temp. Air cooled. Shipping dimensions of 8'5" W X 10'1" high X 8'11" long. Very good condition. Included is a new pump.

**Asking Price \$31,500 USD**

<https://themonty.com/project/itemg196-surface-combustion-endo-generator/>

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## **Item#G178 Sergeant & Wilbur Ammonia Dissociators (4 Available)**

Built by Sergeant & Wilbur, 4 electrically heated Ammonia Dissociators. Model GAD3000E. 3,000 CFH capacity. Maximum temperature 1759F. Voltage 480/3/60/60 kW. External dimensions of 5'W x 6'H x 8'L. **Controls:** Mounted and wired in a free standing panel includes the following:

- Yokogawa UT 350 digital control for dissociator undertemp.
- Yokogawa UT 350 digital control for dissociator overtemp.
- Yokogawa UT 350 digital control for dissociator temperature control.
- Two(2)Yokogawa UT 350 digital controls for vaporizer lower/upper zone.
- Yokogawa UT 350 digital control for vaporizer overtemp.
- All necessary signal lights, timers etc.

Mounted in the same control cabinet are three (3) SCR's. Two (2) "Halmar Robicon" and one (1). "Ametek". One is for dissociator heating elements and the other two are for vaporizer lower/upper zone heaters.

**Description:** Electrically heated Ammonia Dissociator suitable for supplying up to 3000 CFH of atmosphere with a composition of 75% Hydrogen and 25% Nitrogen. This atmosphere is obtained by cracking anhydrous ammonia vapor in a catalyst filled vessel maintained at a temperature of 1700°F to 1850°F.

Incoming ammonia pressure is reduced before retort entry. At the outlet of the

retort the hot dissociated ammonia passes through a dry cooler where the gas is cooled to near room temperature. It then passes through a flowmeter and on to the consuming device. This dissociator includes a Sargeant & Wilbur Ammonia vaporizer. This dissociator is provided with two (2) catalyst filled heat resisting alloy retorts. The retorts are mounted within the insulated dissociator heating chamber. The heating chamber consists of heavy Mullite T-Slot tiles. Retorts are heated with Sinuous-wound Nichrome Ribbon Heating elements which are mounted in the tile slots. The element tails and studs extend through the rear wall of the dissociator. Elements can be removed through the rear wall without having to unpack furnace insulation etc. A step-down transformer (480V to 240V 112.5 KVA) is included. Manuals and drawings are also included. Very good condition.

**Asking Price \$29,500 USD**

<https://themonty.com/project/itemg178-sargeant-wilbur-ammonia-dissociators-4-available/>

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## **Item#G176 Surface Combustion Endo Generator**

Manufactured by Surface Combustion. Natural gas heated 675 CFH/HR. Model # RX 35-75-3V. Maximum temperature 1950F. 7500 CFH capacity. Controls are complete, water cooled. SSi atmosphere controls and Atmosphere Engineering "Endo Injector". Very good condition, ready to go.

**Asking Price \$75,000 USD**

<https://themonty.com/project/itemg176-surface-combustion-endo-generator/>

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## **Item#G173 Lindberg Endo Generator**

4500 CFH, gas fired. Retorts and brickwork are in excellent condition however it requires temperature controls and an air cooler (vendor has partially completed changing from water cooling to air).

**Asking Price \$17,500 USD**

<https://themonty.com/project/item173-lindberg-endo-generator/>

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## **Item#G169 Gasbarre / Sinterite Endo Generator**

3000 CFH, electrically heated 460/3/60/63 Amps/50kW. New in 2006. External dimensions of 106" wide x 75" deep x 116" high. Controls are enclosed in a panel attached to the side of the generator. Honeywell UDC 3200 digital temperature controller and Honeywell UDC 2500 digital high limit safety. Control switches with indicating lights are flush mounted in the enclosure. Flange mounted fused disconnect switch for control power. Separate non fused disconnect for the main power. Waukee flow meters are manifold mounted for incoming and outgoing gases. Flow meters include: Natural Gas 0-1000 CFH, Air 0- 2500 CFH, (3) Mixed Gas 0-1500 CFH and Endo 0- 3500 CFH. Step down transformer for reduced voltage to the heating elements. Electrically heated 3 retort generator. Refractory lined shell with vertically mounted retorts. Total of twelve (12) silicon carbide heating elements, 6 on each side are mounted through the chamber for good uniform heating of the alloy retorts. The natural gas and air pass through a Waukee "mixor" valve then into the Waukee gas pump. Mixed gas enters the 3 "mixed gas" flow meters, through the Selas fire checks and enters the top of the retorts. The gas travels through the catalyst filled heated retorts and exits at the bottom. The exiting Endothermic gas passes through water cooled chambers then finned cooled air heat exchangers then through the Endothermic flow meter. A pressure regulator is supplied on the exiting gas piping. Good condition.

**Asking Price \$29,500 USD**

<https://themonty.com/project/itemg169-gasbarre-sinterite-endo-generator/>

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# **INDUCTION HEATING SYSTEMS**

See something you need, click on the link or scroll through all the items for sale.  
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## **Item#I184 Pillar Mark 11 100kW 10 kHz Power Supply**

Manufacturer: Pillar

Model No. Mark 11

Mfg. Date: 1996

100 kW, 10 kHz

Runs well, in good condition. Was running until recently when uninstalled.

**Asking Price \$15,000 USD With Shipping Included**

<https://themonty.com/project/itemi184-pillar-mark-11-100kw-10-khz-power-supply/>

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## **Item#I183 Pillar Single Spindle Induction Scanning System**

Manufactured by Pillar Induction this is a Model; AB7102-107/MK 11, Serial Number 3815. Voltage; 480V/3/60/266 Amps/222 KVA. Power supply; 200 kW, 3 kHz with a 24" Scanner. System is skid mounted with a footprint of 8'W x 10'H x 12'L. Controls; Mounted and wired inside an enclosure with fused disconnect includes an Allen Bradley SLC5/04 with touchscreen interface. This system includes a Pillar MK 11 200 kW, 3 kHz power supply, stainless steel DI water system w/plate & frame heat exchanger, 24" scanner attached to heat station and stainless steel electrically heated quench tank. Very good condition.

**Asking Price \$75,000 USD**

<https://themonty.com/project/itemi183-pillar-single-spindle-induction-scanning-system/>

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## **Item#I182 2007 Ajax/Tocco 48" Vertical scanner**

2007 Ajax/Tocco 48" Vertical scanner (42" max hardening length). Single spindle with a 300# weight capacity

Touchscreen controls with 15" monitor. Recipe storage for 500 part files. Quality assurance signature monitoring includes: Energy monitor at the coil, quench pressure, flow and temperature 400 KW, 1.1 – 3.0 kHz power supply integrated to the vertical scanner. Both scanner and power supply are in excellent operating condition.

**Asking Price \$75,000 USD**

<https://themonty.com/project/itemi182-2007-ajax-tocco-48-vertical-scanner/>

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## **Item#I181 Pillar Induction Heat Treat System 50 kW, 50 kHz**

This is an automatic Lift and Rotate Machine with a single lift position and TWO heat stations allowing for heating in two different locations in one machine cycle. The two heat stations are controlled by a transfer switch that transfers power from one position to a second position. This is a manual load/unload automatic cycle machine with Allen Bradley controls and Panelview 1000 operator interface. It has an automatic door close/open and light curtain for operator safety. Power Supply is a Pillar MK11 50 kW, 50 kHz IGBT Type. Entire unit is mounted on a common base for easy transport and re-installation. Other details include:

Rotational Drive Speed (Variable): 0- 200 RPM

Integral Quench Reservoir: 100 Gallon

Dimensions (Induction Heater) (L x W x H): 155" x 120" x 115"

Weight Estimate: 20,000 Lbs.

**Asking Price \$49,500 USD**

<https://themonty.com/project/itemi181-pillar-induction-heat-treat-system-50-kw-50-khz/>

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## **Item#I179 Semi-Automatic Pin Hardening System 25kW, 3/10 kHz**

Ajax Pachydyne 25kW, 3/10 kHz pin annealing/hardening system. This is a small automatic system for Induction Heat Treating small pins. Includes a power supply with matching heat station and a small fixture for heating and drop quenching small diameter parts. Also includes a small conveyor to drag out the parts from

the quench container and water to water cooling and recirculating system and a quick-change coil bus adapter. Good condition.

**Asking Price \$14,900 USD**

<https://themonty.com/project/item179-semi-automatic-pin-hardening-system-25kw-3-10-khz/>

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## **Item#I178 Inductoheat Pick & Place Induction System**

Used Inductoheat Automated 100kW, 400 khz pick and place heat treating machine. This machine has been taken out of production due to completion of a contract. It is in good working condition and is still connected to power. It can be run for the buyer prior to shipping. It was used to harden a gear part 45" in dia. Could possibly be retooled for different part processing within the limits of the machine capabilities. This machine includes a SOLID STATE TRANSISTOR (Thermatool) power supply. These are very heavy-duty power supplies which are generally made by Thermatool for tube welding operations that usually run 24/7. This machine includes:

- Input conveyor with gating and part pickoff locator.
- Three arm Pick and Place mechanism that picks one part from the infeed position, one part from the heating position and one part from the cooldown station. All are transferred at the same time.
- Head Position includes placement into the heating coil, air operated part hold down, rotation, heating and quenching. Quick Change Coil Adapter is also included.
- Cooldown/Exit Idle position includes cooling quench flow.
- Exit position with push off onto exit conveyor with reject station
- Auto Lube System • Quench cooling and recirculating system with bag filter
- Water cooling and recirculating system.
- PLC Control with Panelmate interface
- Most Drawings and DVD Manual Included.
- Optional 6 Ton Chiller available.

**Asking Price \$85,000 USD**

<https://themonty.com/project/item178-inductoheat-pick-place-induction-system/>

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## **Item#I177 Ajax 2 Station Spindle Scanners**

This is an integrated Ajax 2 Station (single spindle per station) 150 kW, 10 kHz Scanner System. It has a single SCR type power supply with a transfer switch to send power to station A or B. It has a single shared Quench Recirculating System with bag filter, single shared Water Recirculating System. Each station has a PLC Control and servo control. PLC is A/B SLC 5/03, Pacific Scientific Servos, and Nematron MMI. Also has Quick Change Coild Adapters (would cost about 4-5k today). This was built in 1998 but appears to have been well maintained and contains currently serviceable components.

**Asking Price \$89,500 USD**

<https://themonty.com/project/itemi177-ajax-2-station-spindle-scanners/>

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## **Item#I174 Ajax Tocco Induction Power Supply & Heat Station**

Manufactured by Ajax/Tocco in August 2005. 480V three phase input is rated to be 1.2MW (1200KW). 660V three phase input is rated to be 2.2MW (2200KW). Unit requires three phase input of 480V, 2500A. System is deigned to work at 2.5 kHz in frequency. Requires 65 GPM of cooling. Buyer must have a dedicated transformer at the three phase input for this machine. Buyer must provide their own coils, bus, and water-cooled cables to attach power supply to heat station and heat station to coils. Limited warranty available. Note: Currently set up to work at 480V input voltage. In order to switch to 660V, buyer needs to change the input breaker. Excellent condition.

**Asking Price \$120,000 USD**

<https://themonty.com/project/itemi174-ajax-tocco-induction-power-supply-heat-station/>

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## LAB EQUIPMENT

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### **Item#L23 Leco Rockwell Hardness Tester**

This Leco Rockwell hardness tester with direct verification was purchased new in 2005 and has seen very little use as it was only used as a spare. Also available are a number of older Rockwell weighted machines as well as many portable Rockwell testers.

**Asking Price \$5,000 Canadian or best offer.**

<https://themonty.com/project/iteml23-leco-rockwell-hardness-tester/>

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### **Item#L22 ATM Brilliant 250H Wet Saw**

Available is an ATM Brilliant 250 H wet saw and ATM pump with wash down and filtration. Saw can accept a 12 inch blade. This unit is operated manually, works well and is in daily use. daily. Vendor has upgraded his lab and this is surplus.

**Asking Price \$8,000 Canadian (roughly \$5,500 USD) or best offer.**

<https://themonty.com/project/iteml22-atm-brilliant-250h-wet-saw/>

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# MISCELLANEOUS HEAT TREAT EQUIPMENT

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

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## **Item#M436 Surface Combustion 36" X 48" Charge Car**

Manufactured by Surface Combustion this is a model DEDP-ER 36-48 charge car. Double ended, extended reach designed for a 36" X 48" Batch IQ furnace. Serial # BC-41103-1. 460 V, 3 PH, 60HZ. Very good condition. Currently in indoor heated storage.

<https://themonty.com/project/itemm436-surface-combustion-36-x-48-charge-car/>

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## **Item#M435 Cast Alloy Baskets, Fabricated Baskets And Cast Base Trays (Used)**

We have available 36 heavy duty cast alloy stackable baskets nearly new with working dimensions of 36" x 24" x 6" high. Also available are 40 fabricated rod baskets with course mesh liners all in 330SS material, again in good, usable condition. Included in this package are 30 reversible base trays in HU material with working dimensions of 36" X 24" in very good condition. Asking prices to come but all offers at this point will be considered.

### **Best Offer**

<https://themonty.com/project/itemm435-cast-alloy-baskets-fabricated-baskets-and-cast-base-trays-used/>

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## **Item#M434 Cryogenic Processor with Integral Tempering**

Type: Cryogenic chamber with integral heater

Work Zone: 18"W x 42"L x 18"H (height can be increased to 34" with extension box)

External dimensions: 30"W x 61"L x 35"H

Temperature: -300F to at least +350F

This heavily insulated cryogenic chamber has an integral tempering heater. The unit can connect to a Liquid Nitrogen tank or a Dewar with an insulated hose.

The cryogenics and the heater work well. The temperature controller and the chart recorder need to be repaired as they are outdated. A height extension box for processing larger parts is included. The unit is on wheels.

Selling As-Is.

**Asking Price \$12,000 USD**

<https://themonty.com/project/itemm434-cryogenic-processor-with-integral-tempering/>

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## **Item#M431 Eclipse Single Ended Recuperative Burners (20 available)**

We have 20 Eclipse single ended recuperative burners and 20 65 inch long silicon carbide inner and outer tubes for sale. Also 20 Honeywell flame relays and all solenoids and gas and air valves also 20 ignition transformers. This system is still installed. New in 1998 and used very little. We can provide removal and packaging. We prefer not to separate. Burners and tubes are currently mounted vertically but can be installed and operated horizontally. These burners are good for any atmosphere furnace such as belts or batch or pits.

**Best Offer**

<https://themonty.com/project/itemm431-eclipse-single-ended-recuperative-burners-20-available/>

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## **Item#M427 Used Houghton MAR-TEMP Oil 355**

Mar-Temp 355 is a high performance accelerated hot quenching oil suitable for use at temperatures of up to 375°F (190°C). It is based upon solvent-refined mineral oils and contains a specialty formulated additive package which provides accelerated quenching characteristics and excellent oxidation resistance and thermal stability. Mar-Temp 355 has a high flash point and will provide long life under arduous operation conditions.

### **Features & Benefits**

- Short vapor phase and fast maximum cooling rate for optimum hardness and physical properties
- Premium hot quenching (martempering) oil providing maximum distortion control of quenched components eliminating the need for rework due to distortion
- Excellent oxidation and thermal stability: Resists formation of sludge and breakdown of oil in use to ensure maximum oil life

**22,000 Liters are available immediately and 16,000 Liters in a month or two.**

**Asking Price \$1.25 USD Per Litre (Located In Canada)**

<https://themonty.com/project/itemm427-used-houghton-mar-temp-oil-355/>

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## **Item#M426 Midbrook Belt Washer**

Midbrook hurricane 5024, stainless steel conveyor through feed type 4-stage parts washer, s/n 44674 (2004), 24" x 24" opening, wash/rinse/rinse/blow off/dry stages, allen-bradley panelview 1000 control, stainless steel metal mesh belt conveyor, demagnetizer, 24" wide plastic infeed and outfeed power belt conveyors. Comes with over 50' of automated feed conveyor. Currently installed without power.

**Asking Price \$89,000 USD**

<https://themonty.com/project/itemm426-midbrook-belt-washer/>

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## **Item#M421 Berg Chiller**

Brand: Sterling. Model: GPAC-20 (2014 mfg. year). Capacity: 5 ton. Voltage: 460V/3/60. In good condition.

**Asking Price \$8,000 USD**

<https://themonty.com/project/itemm421-berg-chiller/>

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## **Item#M417 Soluble Oil Dunk Tank**

Working dimensions of 30" X 48" X 30". Tank has a capacity of 2500 pounds. Includes chart recorder, cooler, recirculation pump, and controls. This could easily be modified or used to water quench aluminum. Good condition.

**Asking Price \$8,000 USD**

<https://themonty.com/project/itemm417-soluble-oil-dunk-tank/>

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## **Item#M416 Wheelabrator**

Wheelabrator 6' Diameter.6" Diameter table blast wheelabrator. 30 HP belt drive. Installed and in use until March 2018. Recently reconditioned with rebuilt auger. Brand New wheel and wheel housing. Good controls with pneumatic operated

control and timer to shut down wheel and notify operator when cycle is complete. Very reliable machine in excellent condition. Table is mounted on the door with full access for overhead crane.

**Asking Price \$75,000 USD**

<https://themonty.com/project/itemm416-wheelabrator/>

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## **Item#M414 Vacuum Residual Gas Analyzer (3 Available)**

Pfeiffer Vacuum PrismaPlus QMG220 Compact Mass Spectrometer, Mass Range 1-200 amu, Catalog # PT M06 211 111, Residual Gas Analyzer. Unused these were new in Dec. 2015 and are still in original factory packaging. Warranty expired, but still factory supported. Each set consists of the following;

1. 1 Each, Quadrupole electronics QME220, P/N PTM28612
2. 1 Each, Quadrupole analyzer QMA200, P/N PTM25253
3. 1 Set, QMS220, Accessories & Spare Parts
4. 1 Each, SP 220, (033-0038 43202) Power Supply 90-264VAC, 2.1mm R/A (24 V Output)
5. 1 Each, 45-0007 43024 UTP-Patch-Cable, 3m, Crossed, Red
6. 1 Each, B4564309YX Inficon Mains Cable (USA) LNPE, AWG 18, 2.5m
7. 1 Each, 45-0006 UTP-Patch-Cable, 3m, 1:1, grey 43024
8. 1 Each, PT882400-T Quadera-software, Version 4.61 12/10/2015 for Windows 7 or XP (32-bit Pro)
9. 2 Each, PrismaPlus QMG220 Operating Instructions (1-English & 1-German)
10. 1 Each, Test Reports and Configuration
11. 1 Each, PT R 26 002 Compact Full Range Vacuum Gauge PKR 251, DN 40 CF F
12. 1 Each, PT 448 250-T Sensor Cable

**Asking Price \$8,800 USD Shipping Included**

<https://themonty.com/project/itemm414-vacuum-residual-gas-analyzer-3-available/>

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## **Item#M411 SBS Quench Oil Coolers (2 Available)**

Air to oil quench oil coolers manufactured by SBS Corporation. 480V/6/60. External dimensions of 6' wide X 5' high X 21' long. This unit has

three (3) NEMA type disconnect switches mounted on side of unit. Standard "SBS Quench Air" air cooled heat exchanger with removable tube manifold, propeller fans for moving air across the tube bundle, flanged inlet & outlets, three (3) NEMA type disconnect switches mounted on the side of the heat exchanger. This unit has a removable top that has louvers for directing the air horizontally instead of vertically. Good condition.

**Asking Price \$13,500 USD Each**

<https://themonty.com/project/itemm411-sbs-quench-oil-coolers-2-available/>

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## VACUUMS FURNACES

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### **Item #VF370 Abar Ipsen HR-50 X 48 2 Bar Vacuum Furnace**

Manufactured by Abar Ipsen in 1988 this is a Model HR-50 X 48 vacuum furnace with 2 Bar Quenching. General Description; External quench, horizontal vacuum furnace with 2 Bar quench capacity.

Hot Zone: New in 2017. Graphite board, CFC lined, graphite elements & hearth

Work Zone: 36"W x 48"L x 30"H

Temperature: 2400°F

Uniformity: Owners Rating: 1100-1400F, Class 3 (+/-15F); 1401- 2225F Class 4 (+/-18F)

Vacuum System: Varian 35" Diffusion Pump, Stokes 615-MHR, Blower, Stokes 412 Mechanical Pump

Footprint: 23' Wide x 16' Long x 14' High Weight Capacity: 2000 lbs @ 2400°F

Controls: Granville Phillips 370 Stabil-ion Controller, Eurotherm and Honeywell

Temperature Controllers Gas Cooling: 2-Bar Quench Argon or Nitrogen, 50 HP 4400 CFM Gas Blower

Spares: Spare plenum ready to rebuild as second hot zone. Manual available

Voltage: 460V, 3PH, 60Hz

Power Supply: 225 KVA

Condition: Operational, installed and in service. Will be removed from service May 2020.

**Asking Price; \$175,000USD.**

<https://themonty.com/project/item-vf370-abar-ipSEN-hr-50-x-48-2-bar-vacuum-furnace/>

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### **Item#VF369 Surface Combustion 2 Bar Quenching Vacuum Furnace**

Manufactured by Surface Combustion in 1991 this is a model IHVP 36-48-36 PC. Electrically heated with a maximum operating temperature of 2200F and a minimum of 1200F. 360 KW, 480V, 3PH, 60HZ. Working dimensions of 36" X 48" X 36". Stokes pumping system. No diffusion pump however there is a port for

one. Data Vac and SSI controls. Always operated on a closed loop cooling system. Furnace installed but not in use. Furnace will require work on the hot zone, the fan motor needs to be rebuilt, it will also require a transformer, vacuum gauge and electrical contactor. Consider this a rebuild project but this will be reflected in the asking price which will be available shortly.

**Asking Price \$49,000 USD**

<https://themonty.com/project/itemvf369-surface-combustion-2-bar-quenching-vacuum-furnace/>

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## **Item#VF368 Solar Manufacturing Vacuum Furnace 2 Bar – Like**

New

History: This furnace was previously installed in a customer's facility, fully tested and accepted, but was never placed into service, therefore it is like-new and is in excellent condition. The furnace went into operation in May, 2013 and was only run for a few months during their qualification process. Subsequently, the process that they were developing went away and the furnace just sat and collected dust. However, it was under vacuum and tied into a Dry Coolers system (not included) that Solar Mfg provided charged with water treatment. Everything is completely intact.

- Manufacturer: Solar Manufacturing
- Model: HFL-4251-2IQ Vacuum Furnace
- The entire hot zone consists of a 1-1/2" graphite insulated hot zone supported on a heavy-duty #304 stainless steel structure.
- Hot zone measuring 26" W x 26" H x 52" D
- Double walled, water cooled A-36 carbon steel chamber designed for Two (2) bar positive pressure Nitrogen or Argon gas cooling.
- Weight capacity of up to 1,800 pounds
- Energy efficient graphite felt insulation for operating temperatures up to 2150°F
- Temperature uniformity of  $\pm 10^{\circ}\text{F}$  between 500°F to 2150°F
- 50 horsepower high velocity gas recirculating system
- Stokes Model 412J / 615MHR, Mechanical / Booster Pump
- Allen Bradley Variable Frequency Drive for 50 HP gas blower
- Single inert gas backfill system
- 195 KVA VRT hot zone power supply

- SolarVac<sup>®</sup> 5000 control system
- Type “K” thermocouples for over temperature and control
- Twelve (12) type “K” workload thermocouple assembly with thermocouples
- EMT conduit between control cabinet and furnace
- One year warranty (from date of shipment)
- One service engineer to commission the furnace, post assembly at Customer’s facility in continental USA

**Asking Price \$300,000 USD**

<https://themonty.com/project/itemvf368-solar-manufacturing-vacuum-furnace-2-bar-like-new/>

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## **Item#VF367 ABAR HR6660 Refurbished Horizontal Loading Vacuum Furnace LOCATION UK**

- Working dimensions of 600mm Wide X 760mm High X 1200mm deep, 1000kg capacity
- Floor space required 6 m wide X 4.0 m high X 6.0 m deep
- Maximum operating temperature of 1270F. +-5 C from 600-1200C
- Connected load 165Kva
- Ultimate vacuum 1.0 X 10<sup>-5</sup> mbar
- Operating vacuum 5.0 X 10<sup>-5</sup> mbar
- Partial pressure Nitrogen/Argon 0.1 X 10 mbar
- Mechanical Pump-Model Edwards GV600 or Leybold SP630
- Booster Pump Model Edwards EH4200 or Leybold WAU 2001
- Diffusion Pump Model Varian HS32
- Cooling fan rated at 110Kw
- Nitrogen Quenching gas maximum pressure 800mbar
- Gas consumption at max pressure 10m<sup>3</sup> approximately
- Graphite Hot Zone and heating elements
- VCS+ controller
- Siemens PLC
- VCS+ temperature/vacuum recorder
- Pirani Vacuum Gauge-Edwards

This is a completely rebuilt vacuum heat treatment and Brazing furnace Model Abar HR6660 which comes with a new vessel, new control system, new hot zone

and vacuum pump overhaul. Delivery 10-12 weeks with a complete warranty.  
**LOCATED IN THE UK.**

**Price and further details available upon request**

<https://themonty.com/project/itemvf367-abar-hr6660-refurbished-horizontal-loading-vacuum-furnace-location-uk/>

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## **Item#VF366 Dynatech DFHH1500 Rebuilt Horizontal Loading Vacuum Furnace (LOCATED IN THE UK)**

- Working dimensions of 1500mm wide X 1500mm high X 1500 mm deep
- Maximum load 3200 kg
- Floor space required 10 m width X 4.0 m high X 10.0 m deep
- Maximum operating temperature of 1280C
  - +-6C from 600C to 1200C
- Ultimate vacuum of 1.0 X 10-5mbar
- Operating vacuum of 5.0 X 10-5mbar
- Partial pressure Nitrogen/Argon 0.1 X10 mbar
- Mechanical pump (X2) Leybold Model SP630
- Booster Pump (X4) Edwards Model EH4200
- Argon quenching gas maximum pressure 1 Bar
- VCS+ Controller
- Allen Bradley PLC
- VCS+ temperature/vacuum recorder
- Pirani Vacuum Controller-Edwards
- Graphite Hot Zone & Graphite Heating Elements
- Gas fan cooling is included@1 Bar abs

This is a vacuum heat treating and brazing furnace Model # Dynatech DFHH 1500. It includes a new control panel and VCS+ system, refurbished hot zone, vacuum pump overhaul and delivery, installation and commissioning. Completely rebuilt with a 12 month warranty on new components and a 6 month warranty on all other items. LOCATED IN THE UK. Asking price and complete technical details available upon request.

**Asking price and complete technical details available upon request**

<https://themonty.com/project/itemvf366-dynatech-dfhh1500-rebuilt-horizontal-loading-vacuum-furnace-located-in-the-uk/>

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## **Item#VF365 Ipsen Model VFC 524 R Vacuum Furnace**

Manufactured by Ipsen in 1978 this is a model VFC-524-R vacuum furnace. Serial #62632. Rectangular hot zone has working dimensions of 24" X 36" X 24". Hot zone in fair condition, will need to be replaced in the near future. 1 bar nitrogen quenching. Roughing pump and diffusion pump. Operating temperature of 2100F. In place but not operating. Needs to be removed.

**Best offer**

<https://themonty.com/project/itemvf365-ipSEN-model-vfc-524-r-vacuum-furnace/>

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## **Item#VF364 TM Vacuum Furnaces (2 available)**

Manufactured by TM Vacuum Products in 1989. Both are model SS 1216 M units. Serial numbers W1944-1-89 and W2104 2-89. Work zone dimensions of 12" X 12" X 40" deep, load capacity of 200 pounds. Stainless Steel construction, Cryopump Vacuum system. 3 zones of temperature control. Leybold roughing pumps with Varian Cry Pumps. Moly hot zone and elements. 3000 F operating temperature. Vacuum level of  $1\times10^{-4}$ . Currently installed but not in use. Hot zone in 1 unit in reasonable condition, hot zone in the second will need to be replaced. Honeywell controls.

**Asking Price \$35,000 USD For Both**

<https://themonty.com/project/itemvf364-tm-vacuum-furnaces-2-available/>

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## **Item#VF363 Vacuum Oil Quench Carburizing Furnace**

Manufactured by Abar Ipsen this is a Vacuum Oil Quench Carburizing furnace. Abar Ipsen Model; Carburizer LOG-3436C-GLO. Working dimensions of 26" wide X 36" deep X 26" high. Operating temperature of 1700F. Uniformity of +/-10F at 1675F. Power supply 126KVA. Utility requirements; Electrical: 480V/3Ph/60Hz, 500 Amp circuit breaker. Graphite heating elements. Cylindrical graphite hot zone. Stokes 412-014 roughing pump, vacuum booster. Single SCR with three rheostats, Hunterdon VRT's.

Controls: Beckhoff 15" Touchscreen and Computer with fully-interactive HMI and full recipe control; Allen Bradley Compact Logix PLC with an L32E processor; Honeywell Temperature Controller and Over-temperature Controller; Yokogawa CX1000 digital chart recorder.

Footprint: Furnace 18'W x 18'L x 15'H above floor. Pit 9'W x 17'L x 28"D.

Controls 3'W x 11'L.

**Asking Price \$250,000 USD**

<https://themonty.com/project/itemvf363-vacuum-oil-quench-carburizing-furnace/>

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## **Item#VF361 Sunbeam Vacuum Furnace**

Description: Front Loading Sunbeam Vacuum Furnace. Currently in storage but has been operational in the past year. Well maintained and in excellent condition. Used exclusively for Aerospace brazing applications. All manuals, prints and maintenance records are available.

Specifications:

- Model: 4014
- Work Zone: 48" H x 48" W x 60" L
- Pumps: Stokes 212 roughing, MD Pneumatics 5514 blower, Varian 32 Diff and Welch 1376 holding.
- Max. Temperature: 2400 Degrees F
- Uniformity: +/- 15 F
- Power Requirements: 460/3/60

Controls:

- CompuVac control cabinet, new in 2008.
- AllenBradley Model SLC5/05 PLC.
- Two Televac Pirani Gauge Tubes.
- Televac Cold CathodeGauge Tube.
- Honeywell Digital Chart Recorder.
- Honeywell Over-temperatureController.
- Compuvac Work Station with Flat Panel Touchscreen.
- MM200 TelevacVacuum Gauge.

Also included are extra heating elements, loader and serpentine furnace rack.

**Asking Price \$125,000 USD**

<https://themonty.com/project/itemvf361/>

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## **Item#VF360 Vacuum Aluminum Brazing Furnace**

**Manufacturer: PV/T, Inc.** (Now an Inductotherm Group company)

Type of Furnace: Vacuum Aluminum Brazing

Work Zone: Horizontal, 24" Wide x 37" Long x 33" High

Temperature Rating: 1250°F

Used for: Brazing Radiators

Design Temperature Uniformity: +/- 5°F (6 zones of control)

Hot Zone Design: Rectangular Shape, Elements all 4 sides, top & bottom

Hot Zone Condition: Good

Vacuum Pumps: Varian HS-16 Diffusion Pump (New in 2005), Stokes 412-H

Roughing Mechanical Pump, Stokes Mechanical Booster Pump, Welch 1402

Holding Pump

Floor Space Requirement: 8 ft x 11ft for furnace, 2 ft x 5 ft for control panel

Power Requirement: 480V/3Ph/60Hz, 200 Amp Disconnect

Controls: Honeywell, Barber-Coleman

Accessories Included: Loader, Water Cooling System (as shown in photos)

Disassembly: No charge, Just pay for rigging

**Asking Price \$95,000 USD**

<https://themonty.com/project/itemvf360-vacuum-aluminum-brazing-furnace/>

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## **Item#VF357 Abar Ipsen Rebuilt Vacuum Furnace**

- Manufacturer: Abar Ipsen
- Model: HR 46X72
- Condition: Rebuilt in 2015, used through 2016. Very good.
- Hot Zone: 36"W x 24"H x 72" deep, Moly, New in June 2015
- Elements: Moly
- Controls: New Ipsen control panel, new in 2015.
- Temperature: 2400F
- Diffusion Pump: 32" Varian Diffusion Pump (new in 2015).
- Pumps: Stokes 212 mechanical pump was rebuilt in early 2016. Welch 1398 holding pump was rebuilt in 2015. Stokes 615 blower recently rebuilt.
- Estimated Footprint: 21' Wide (+ water surge tank which could be relocated 4'x10'x6'H). 24' Deep (+10' deep loader). 12' High. Spool piece adapter added to remove need for diffusion pump pit.
- Power: 480 Volts, 3 Phase, 60 Hz
- Loader Included, 10' Long x approx. 3.5' Wide.
- 2-Tier TZM Moly Grid Fixture, 36" Wide x 72" Long x 18.5" Tall.
- Cold Trap: Liquid N2 fed Cold Trap

- Status: Furnace is currently disassembled in storage. Furnace was in production until January 1st, 2017.

**Asking Price \$350,000 USD**

<https://themonty.com/project/itemvf357-abar-ipsen-rebuilt-vacuum-furnace/>

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## **Item#VF355 Vacuum Furnace Control Panel**

Built by Loy Instruments in 2014 for use on an Abar Vacuum furnace. System consists of a free standing, 2 door panel with Honeywell 900PLC with Honeywell Over Temp and Televac vacuum controller. Panel was used for 2 years before it was removed from service. Panel has always been in a controlled atmosphere environment maintained at 70F. Very clean and in excellent condition. New this was \$60,000 USD.

**Asking Price \$26,000 USD**

<https://themonty.com/project/itemvf355-vacuum-furnace-control-panel/>

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## **Item#VF353 Bottom Load Vacuum Furnace 60" X 60"**

Vac Aero Rebuilt Bottom Load Vacuum Furnace, working dimensions of 60" x 60". Model: VAV-6060-BL. Hot Zone: Moly face with graphite insulation. Vacuum Pumps: 35" Diffusion Pump, Stokes 1722 Package. Quench System: 125 HP external quench. Rebuild in progress: Complete exterior reconditioning. Interior of pipes, fna house and vessel receive sand blasting and new high temp white epoxy paint. New hosing. New hot zone. New quench heat exchanger. Rebuilt 125 HP motor. Rebuilt mechanical pump and blower. (New controls available at extra cost). PHOTO BELOW SHOW FURNACE BEFORE REBUILD.

**Asking Price \$495,000 USD**

<https://themonty.com/project/itemvf353-bottom-load-vacuum-furnace-60-x-60/>

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## **Item#VF348 C.I. Hayes Vacuum Furnace**

C.I. Hayes Vacuum Furnace. The front door is mounted on an I-Beam trolley and slides to the side for access to the interior. Quench section is located directly in front of the heat chamber with a hydraulically operated door separating the chambers. Hot zone is lined with graphite felt backed up with ceramic fiber blanket. Six graphite rod elements are mounted horizontally across the chamber, 3 over and 3 under the work area. Hearth rails support the work load. Hydraulic

cylinder transfers the load between the chambers. Hydraulic pumping system lowers and raises the work load into the tank. There is a Kinney vacuum Electrically heated with a voltage of 480/3/60/20 kW. Model # VCQME and serial # 16482 (1987). Max operating temperature is 2400°F. Working dimensions of 8"W x 6"H x 14"L with external dimensions of 5' wide x 9' 6" long x 8' 5" high Furnace only – not including pumps, transformer. Controls are mounted and wired in a separate enclosure. There is a Honeywell DCP 511 programmable controller and a Honeywell round chart recorder / high limit with digital readout. MKS vacuum gauge indicates vacuum level in the quench area and the heat chamber. Control switches for all functions of the furnace including temperature, vacuum, nitrogen backfill, gas fan and oil agitator are flush mounted in the enclosure. Controls for transferring the load and elevator controls are located next to the furnace door. Voltage reduction transformers with DC power drivers are mounted in a NEMA 12 enclosure.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemvf348-c-i-hayes-vacuum-furnace/>

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## **Item#VF342 Ipsen Bottom Load Vacuum Furnace**

Ipsen Bottom Load Vacuum Furnace 48" X 54". Completely Re-Manufactured IPSEN 48" Dia x 54" High Vertical Bottom Loading Vacuum Furnace for your Heat Treating and Brazing requirements. This furnace complies and meets the SAE Aerospace Material Specification AMS2750 Latest Revision E (AMS2750E) and NADCAP. Operating temperature from 800°F (427°C) to 2400°F (1315°C). Temperature uniformity  $\pm 10^{\circ}\text{F}$  ( $\pm 6^{\circ}\text{C}$ ) between 1004°F (540°C) to 2400°F (1315°C). Equivalent to Class 2 Furnace in AMS2750E standards. Circular one-piece gas plenum/hot zone support structure provides strong, uniformly expanding support for elements Work Zone Dimensions are 48" (1219 mm) Diameter x 54" (1372 mm) High. Hot Zone Insulation is composed of the following layers:

Hot Face  
First Layer  
Second Layer  
– 0.060" Thick Graphite Foil with CFC Sheet at ends

- 1.00" Thick High Purity Graphite Felt
- 1.00" Thick High Purity Graphite Felt

Hearth gross load weight capacity of 3000 lbs (1361 kilograms) at 2400°F (1316°C). Ultimate Vacuum (nominal) 10-5 Torr Range. Re-manufactured Stokes 412H-11, 300 C.F.M. (8,500 litres per minute) mechanical roughing pump. Re-manufactured Stokes 900-615, 2,000 C.F.M. (56,600 litres per minute) as blower pump. Re-manufactured Varian NHS-35" Diffusion pump, pumping speed 50,000 litres per second. Comes with Safety Guard against hot body surfaces. New Leybold Trivac 8B, 5.7 C.F.M.(161 litres per minute) Rotary Vane Vacuum pump as holding pump. New Oil Mist Filter System for pumping system exhaust. One (1) Re-manufactured External 4400 CFM 50HP Spencer Turbine Co. Gas Fan Cooling Motor and heat exchanger system. One (1) Re-manufactured step-up transformer for Gas Fan Motor. One (1) Backfill Reservoir Gas Tank @ 120 p.s.i.g of 5,000 litres capacity. Argon Quenching To Maximum 2 Bar. Consider this basically a new furnace with a 12 month warrantee. Asking \$525,000 USD with start up and training included. Half the price of new.

**Asking Price \$525,000 USD**

<https://themonty.com/project/itemvf342-ipsen-bottom-load-vacuum-furnace/>

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## **Item#VF335 ALD Vacuum Carburizing Furnace**

Loading Dimensions : Width 400 x Length 400 x Height 400 mm. Loading Capacity : 80 kg max. Cooling Fan Motor : 75 kW, 3000 rpm for 10 bar N2. Vacuum System : Leybold SV100 Mechanical Pump. Leybold WA501 Roots Pump. Leybold E250 Mechanical Pump. Leybold WA1001 Roots Pump. Vacuum Level : <5x10<sup>-2</sup> mbar. Leak Rate : <5x10<sup>-3</sup> mbar l/s. Heating Zone : 120 kW, 2 zones. Plasma Chamber : 60 kW, 1 zone. Diffusion Zone : 180 kW, 3 zones. Max. Tempereture : 1250 °C (Heating chamber). Operating Temperature : 800-1100°C. Process Gases : Nitrogen, Methan, Argon, Hydrogen. Installed Power : 700 kVA, 3x400V 50 Hz. Manufacturing Year : 2002.

**Asking Price \$75,000 Euro**

<https://themonty.com/project/itemvf335-ald-vacuum-carburizing-furnace/>

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## **Item#VF330 Surface Combustion Vacuum Furnace**

Surface 2-Bar Quench Vacuum Furnace. Model# HVPI 484824. Maximum Temperature: 2400F. Power requirements: 460/3/60, 275 KW. Hot Zone Dimensions: 48" Wide x 48" Deep x 24" High. External Dimensions: 12' Wide x 12' Deep x 11'High. Features: Horizontally Loaded Vacuum Furnace complete with 412 Stokes Vacuum Pump, Roots 615 Booster Pump, 2 Bar Quenching, Graphite Heating Elements, "Autoclave" Style Swing-Out Front Door, and Powered Big Joe Loader. Also Included is (1) Crate of New Spare Heating Elements and Connectors. Controls: Free-Standing Control Panel complete with Marathon Monitors Digital Temperature Controller, Honeywell Digital High Limit, and Honeywell Round Chart Recorder. Condition: Very good – Operational. Approx. Weight: 25,000 lbs

**Asking Price \$119,000 USD**

<https://themonty.com/project/itemvf330-surface-combustion-vacuum-furnace/>

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## **Item#VF327 Surface Combustion Vacuum Temper Furnace**

Working dimensions of 36" x 48" x 24" and is approximately 23 years old. The equipment is in good condition with Honeywell HC900 Controls, Telvac Vacuum Control & Sensors, Honeywell UDC 2000 overtemp control, Stokes 412 Vacuum Pump, Controls Concepts SCR, McLeen Cabinet Cooler. Brand New Heating Elements ready to be installed. Internal Fan Circulation. This unit was pulled from service to make room for a new Vacuum furnace just recently. Max Temp 1500° F, 480 Volt / Three Phase.

**Asking Price \$50,000 USD**

<https://themonty.com/project/itemvf327-surface-combustion-vacuum-temper-furnace/>

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## **Item#VF326 Ipsen Vacuum Furnace**

Ipsen 924 Vacuum Furnace. Ipsen Model: VFC-924-R Vacuum Furnace S/N: 58699. Working dimensions of 32" wide X 53" deep X 26" high. Maximum operating temperature of 2400F, recently surveyed from 1400-2000F at +-25F. Molybdenum faced hot zone. Stokes 412 roughing pump, Stokes 615 booster pump, and Varian HS-20 diffusion pump. 40 HP fan. Water cooled. One zone of

control. Honeywell controllers and chart recorder. MKS 937B Vacuum Gauge Controller. Good operating condition. 480 Volts. Was used in an aerospace facility before it was very recently removed.

**Asking Price \$80,000 USD**

<https://themonty.com/project/itemvf326-ipsen-vacuum-furnace/>

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## **Item#VF321 Ipsen Vacuum Furnace**

- Manufacturer: Ipsen
- Model: VFC-524, working dimensions of 24" wide X 36" deep X 24" high
- Temperature: 2400F
- Moly-faced hot zone
- Graphite heating elements
- 18" Ipsen Diffusion Pump
- Stokes 412H-10 mechanical pump
- 50 kVA power transformer
- Top-mounted cooling fan with 15 HP Motor
- New control Panel with Athena AT25 Digital Temp Control, Hastings Series 310 Digital Vacuum Controller, and L&N strip chart recorder.
- Currently in storage in San Diego, CA area

**Asking Price \$58,000 USD**

<https://themonty.com/project/itemvf321-ipsen-vacuum-furnace/>

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## **Item#VF320 Thermal Technologies Vacuum Furnace**

High Temperature Vacuum Furnace. Manufactured by Thermal Technologies LLC, Model 121224G. Working dimensions of 12" wide X 12" high X 24" deep. Maximum load weight of 200 pounds. Operating temperature of 1565C, maximum temperature of 2000C. Operating vacuum level 10-2 torr range. Ultimate vacuum level 10-3 torr. Process gas argon. Front and rear doors. Graphite heating elements with rigid fibrous graphite insulation panels (hot zone is NOT installed but virtually all the components are included) 125jVA power supply. Rotary vane pump , Trivac B Leybold Model D65B (53CFM). Eurotherm Model 2704 high performance controller/programmer with SpecView software. Furnace comes complete with parts washer.

**Asking Price \$75,000 USD**

## Item#VF316 AVS Vacuum Furnace

Manufacturer: Advanced Vacuum Systems (AVS). Model: HMF-24-24-48-1100, S/N 4-1284-0683 Approx. 1990. Chamber: Cylindrical, Horizontal, Stainless Steel with front & rear access doors for ease of maintenance. Hot Zone: Used, All-Metal Moly/SS Shielded Hot Zone with Moly Elements and Moly Hearth Ass'y. Vacuum System: Stokes Mechanical Pumps and Varian Diffusion Pump (Typ. 10-4 to 10-6 Torr ultimate) Pumps: Varian HS-20 warranty rebuilt Diffusion Pump. Stokes 310 warranty rebuilt mechanical blower pump (booster). Stokes 212 warranty rebuilt Mechanical Roughing Pump. Holding Pump for diffusion pump. Power: 480V/3Ph/60Hz, 300 Amp, 250 KVA Heating. Floorspace Requirement: Approx. 15' x 15' x 11'H. Work Zone: 24"W x 48"D x 24"H. Max. Temperature Rating: 1100°C (2012°F) Max. Load Rating: > 1500 lb. Upgraded Controls: SSI 9220 Controller with 12.1" Advantech Touch Screen HMI and built in digital data acquisition, SSI Series 804L Hi-Limit, SR12 Remote Input Satellite Recorder, New Allen-Bradley Micrologix 1400 PLC, Televac vacuum instrument & gauges. Gas Cooling: External VFD Drive Blower and Heat Exchanger, 1 Atmosphere Pressure. Other: Included – 24" x 48" used 2-Tier Molybdenum Grid Fixture. Both front and rear doors have ports for adding end heating elements, if desired (not included). Rear door also has a port for a circulation fan, if desired (not included).

**Asking Price \$170,000 USD**

<https://themonty.com/project/itemvf316-avs-vacuum-furnace/>

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## Item#VF314 Ipsen Bottom Load Vacuum Furnace

Work Zone: 60" Diameter x 96" Tall with a Temperature of 2400F. Diffusion pump: 35" diffusion pump, with port and right angle valve. Manufactured in the 1980's with a Power of 480V/3Ph/60Hz; 600kW. Hot Zone: 2008 reline, graphite elements. Cooling Gas: Was running Argon; capable of 1-Bar cooling. Top mounted cooling fan. Water Cooling: Includes Dry Cooler closed-loop AquaVent water cooling system; 2005, 200 GPM, Plate & Frame Heat Exchanger with Thermacare fiberglass Tower.

**Asking Price \$325,000 USD**

<https://themonty.com/project/itemvf314-ipsen-bottom-load-vacuum-furnace/>

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## **Item#VF313 GT Technologies Top Loading Vacuum Furnaces**

Top Loading Vacuum Furnaces (2 available). Manufactured by GT Technologies, Model # AMPF-4836HP – 2015. Working dimensions of 1200mm diameter x 900mm High. Operating temperature of 2100C. Controls by Loy Instruments (Honeywell graphic touchscreen). This unique ultra high temperature furnace is high vacuum, has resistance heating with all graphite hot zone and graphite felt insulation for high efficiency operation. 480 volt 3PH 50/60 HZ, 160 KVA. Maximum load 1,000 KG. Double Wall Stainless Steel Vessel construction. Platform with Stairs included. Halogen Gas Purge equipped, Dry Vacuum Pumping System with Blower. Graphite Purity levels to less than 5ppm. Cycle time 72 – 84 hours. 10 – 3 Torr vacuum level achievable. Options: Exhaust Scrubber System, Overhead Crane. Very good condition.

**Asking Price \$175,000 USD Each**

<https://themonty.com/project/itemvf313-gt-technologies-top-loading-vacuum-furnaces/>

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## **Item#VF312 Vacuum Furnace**

2400C Vacuum Furnace. Capable of 2400C (4320F). Working dimensions of 10" high x 22" wide x 36" deep element-to-element. External dimensions of 86" high x 76" wide x 85" deep. 480 volts, 3 phase, 225 kw. This unit is capable of both vacuum and atmosphere operation. Graphite rigid board insulations, graphite heating elements on all 4 sides, graphite hearth plate, 6 channel digital chart recorder, Yokogawa UP 550 digital programmable controller. High accuracy Raytek digital optical pyrometer. All New Vacuum Chamber – Tested and Certified and new graphite hot zone. Very good condition.

**Asking Price \$149,000 USD**

<https://themonty.com/project/itemvf312-vacuum-furnace/>

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## **Item#VF299 Sunbeam Vacuum Furnace**

Model # 40236, Serial Number F-170-82. Working dimensions of 36" wide X 120" long X 36" high. Maximum operating temperature of 2552F (1400C). 460 volts, 400Kw, 3 phase. Honeywell digital program control, Honeywell digital overtemperature control, Honeywell strip chart (inoperative) and Granville-Phillips 375 Convection vacuum controller in enclosed panel. Double walled water cooled horizontal load vessel. Interior has a molybdenum liner with graphite heating elements on both walls, roof and floor. 20 HP cooling fan mounted in rear. Pumping system consists of a Stokes 412-11 mechanical pump with Roots booster. Power to the heating elements is through VRT's. A battery powered loader is included. Some of the heating elements were damaged during shipment and will need to be replaced by buyer.

**Asking Price \$95,000 USD**

<https://themonty.com/project/itemvf299-sunbeam-vacuum-furnace/>

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## **Item#VF282 AVS Vacuum Debinding/Sintering Furnace**

This is a horizontal graphite vacuum debinding sintering furnace for steel MIM parts completely rebuilt from top to bottom by AVS in 2010. Working volume – approximately 18 cubic feet, 28" wide x 26" high x 42" long graphite retort, 1500# capacity. Temperature – rated for continuous operation at  $1400^{\circ}\text{C} \pm 10^{\circ}\text{C}$  in vacuum,  $1450^{\circ}\text{C}$  burn-out.  $50\mu$  ultimate vacuum; leak rate  $<10\mu$  / hour, CEDORT (Clean, Empty, Dry, Outgassed, Room Temperature). De-bind system – nitrogen or argon sweep gas, 0 – 100 torr differential pressure controlled by PLC and automatic I-to-P modulating vacuum valve, binder trap, condenser assembly; options available for hydrogen gas and burn-off. De-bind lines heated to keep vapor from condensing in vacuum lines. Fast cooling with circulation fan and automatic gas re-circulation ports. Control system – AVS ACE™ control/data acquisition system. Estimated cold-to-cold cycle time of 16 to 20 hours with AVS "Fast Cool" option. Horizontal jacketed chamber – 60" dia. x 80" long, nominal dimensions, flanged, on legs. SA-516-70 mild steel construction on water jackets and door + body flanges. Stainless Steel inner jacket & dished head plus all power ports Front-loading chamber with 2 doors – both doors on adjustable hinges, with buna o-rings, manual clamps, for operation from 50 millitorr vacuum to 3 psig positive pressure; rear door opens for service. Ports – rough line on side of chamber, delube line from bottom, fan housing flange on rear door

Additional PORTS added to the system to accommodate future system modifications for processing ‘sinter-hard’ P/M materials – a total of up to 7 additional ports ranging from 18” in diameter down to 1” in diameter will be added. Further details available upon request. Currently installed and in excellent condition.

**Asking Price \$149,000 USD**

<https://themonty.com/project/itemvf282-avs-vacuum-debinding-sintering-furnace/>

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## **WASHERS**

See something you need, click on the link or scroll through all the items for sale.  
Searching for something we don't have listed, let us know.

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### **Item#W429 Surface Combustion Spray Washer**

Manufactured by Surface Combustion this is a 36 x 48 x 36 spray washer. Electrically heated 460V, 65 kW, 160°F max. temperature. Very good condition.

**Asking \$19,500.00 USD.**

<https://themonty.com/project/surface-combustion-spray-washer/>

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### **Item#W428 Abar Ipsen Parts Washer**

Model WRD-5-G Dunk/Spray washer. Serial number 60099. Working dimensions of 24" X 36" X 24", maximum load capacity 1200 pounds. Gas heated. 460/3/60 electrical. Currently installed. Very good condition.

**Asking \$19,900.00 USD.**

<https://themonty.com/project/itemw428-abar-ipsen-parts-washer/>

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### **Item#W425 Proceco Rotary Table Washer**

Proceco Rotary Table Washer. Standard Proceco "Typhoon" stainless steel rotary table washer with 2000 pound table capacity. This washer has a wash stage, rinse stage and electrically heated blow-off stage. Wash tank is 600 gallons, rinse tank is 295 gallons. 25 HP wash pump, 360 GPM, 40 psi. 7-1/2 HP rinse pump, 115 GPM, 60 psi. Manual and drawings are included with this washer. Washer options include the following: Center Nozzle Pipe (CNP), Full Flow Filtration, Exhaust Blower, Oil Skimmer, Fresh Water Rinse, Oil Coalescer, PLC Controls, Stainless Steel Construction. Electrically heated with voltage 460/3/60/39 Amps. Model # HD 62-60-S-2000-CO-2-R-BO-SS and Serial # 96-224. Working dimensions of 62" Diameter x 60" High with external dimensions of 8'W x 16'H (11'H shipping) x 13'L. Controls Mounted and wired in a free standing panel includes an Allen Bradley SLC 500 PLC control with

operator interface flush mounted to the door. There are three (3) digital temperature controllers, 1 for 1st stage, 1 for 2nd stage and 1 for blow-off stage. Excellent condition and available immediately.

**Asking Price \$55,000 USD**

<https://themonty.com/project/itemm425-proceco-rotary-table-washer/>

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## **Item#W415 Surface Combustion Parts Washer**

Manufactured by Surface Combustion of Ohio this is a spray washer with working dimensions of 30" X 48" X 30" high. Radiant tube gas heat and rotary drum oil skimmer and separate skim tank located on back of wash. This is partially reconditioned . It is in overall good condition. BEST OFFER.

**For Pricing Please Contact [Jordan@themonty.com](mailto:Jordan@themonty.com)**

<https://themonty.com/project/itemm415-surface-combustion-parts-washer/>

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## **Item#W348 Ipsen Automatic Dunk/Spray Washer**

Model #WRD-11, Serial Number 57690. Working dimensions of 36" wide X 48" deep X 24"+ high, 2200 pound capacity. Electrically heated, 72KW. Companion washer-In/Out or straight through design. Door each end, Cal Rod element bundle. 12" wide belt oil skimmer, air operated-full width elevator rack for submerged oscillation, overhead spray rinse. Overall dimensions of 7' 5" wide X 5' 4" long X 11' 8" high.

**Asking Price \$35,000 USD**

<https://themonty.com/project/itemm348-ipson-automatic-dunk-spray-washer/>

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## **Item#W314 Holcroft Dunk/Spray Washer**

Model GPWS 24-36-24. Electrically heated, 480/3/60/50 amps. Working dimensions of 24" wide X 24" high X 36" deep. External dimensions of 96"W X 143" high X 124" long (91" without skimmer attached). This is a standard dunk/spray washer with 4 Warren Electric immersion heaters. Spray nozzles are arranged over and all sides of the wash area. Load height is 51" from floor to top of rollers. Wheel centres are 14-1/2". Controls are mounted and wired on the right hand side of the washer and includes all necessary pushbuttons and signal

lights. There is a dunk cycle timer and spray cycle timer. A Honeywell UDC 2000 digital temperature controller controls wash temperature. Good condition.

**Asking Price \$18,500 USD**

<https://themonty.com/washers/>

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## In Parting

We always enjoy comments, feedback and constructive criticism. Thanks for your feedback and don't hesitate to let us know your thoughts. Don't forget to visit us daily at [www.themonty.com](http://www.themonty.com).

**Gord Montgomery,**

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