



# **Applications Lab Free Applications Testing**

Experience the Excellence."





# The Gold Standard in the industry.

Our Applications Laboratory is known in the industry as THE LAB. It's where we solve our customers' most challenging heating applications every day.

## A Reputation for Delivering Extraordinary Results

Ambrell's team of engineers is world-renowned for producing extraordinary results. Our innovative and effective induction heating solutions consistently deliver performance excellence in one application after another. It's why THE LAB is the gold standard in the industry.

Have our team of expert engineers design and test the optimal solution for your application, free of charge. All it takes are three easy steps:

- 1. Send us your parts and process requirements
- 2. Our engineers will analyze your process and heat your parts to develop the right solution for your specific application
- 3. You will receive your parts back for inspection as well as a video of the heating process of your parts, and a laboratory report with a system recommendation

We also invite you to visit THE LAB where you can experience our state-of-art testing facility, which is fully equipped with Ambrell induction heating systems and hundreds of proven coils. In addition, you can interface with our engineers and see first-hand how they design prototype coils and develop effective solutions to maximize the efficiency of your heating process.





## The Man Behind The Magic

Dr. Dahake is Ambrell's Sr. Vice President, Global Applications. He has over 25 years of induction experience and leads a worldwide team of induction application experts at Ambrell's renowned applications laboratories. He holds multiple industry-related patents, has authored numerous papers and frequently presents at professional conferences on topics such as induction heating, nanoparticle heating and heat staking. Dr. Dahake holds a Ph.D. in Mechanical and Aerospace Engineering from the University of Rochester.

Dr. Girish Dahake, Sr. Vice President of Global Applications, leads a worldwide team of elite engineers who are uniquely qualified to assist you with your heating process needs. Under the guidance of Dr. Dahake, our engineers have evaluated thousands of applications in THE LAB, so it's likely we have already assessed an application similar to yours.

"Induction heating is a precise, repeatable and efficient method of heating. However, in order to maximize the benefits of induction, it's critical to have the correct system and coil design. Our global team of highly-skilled engineers look forward to assessing your application and making the right recommendation for your process."

Dr. Girish Dahake, Sr. Vice President, Global Applications



Send us samples of your parts for a no charge parts evaluation and system recommendation.

At our Induction Heating Applications Laboratories, we constantly evaluate and develop new uses for induction heating using our advanced induction heating technology.





## Get the Results You Need in Your Heating Process

#### Benefit from our knowledge.

Our experts apply over 30 years of induction heating experience and knowledge to your heating application. We've provided thousands of solutions for parts of every size, shape and material composition.

Our Application Engineers will analyze your process, heat your parts and suggest the best solution for your application. We encourage you to visit the Applications Lab at any time to work on your application with our induction experts.

### Our Applications Laboratories are worldwide.

In our laboratories around the world, we employ our induction heating systems, from compact EASYHEAT table-top models to high-power EKOHEAT floor models.

#### In addition to hundreds of proven coil designs, we:

- · Develop prototype coils for unique applications
- Use videos to provide recorded results
- · Employ modern tools for thermal analyses
- Use closed-loop temperature control
- Assist you with process development

#### It doesn't get any easier than this.

Let us help you determine the best induction heating method for your manufacturing process! We will evaluate your process heating needs and propose a smaller, more efficient induction heating power supply. Experience improved uptime, higher throughput and reduced energy usage.

#### Have your parts and process evaluated!

Help us understand your process and requirements by answering the questions on the reverse side of this sheet. Then call us about your parts; let us review your information and advise you. If we determine tests are needed, send your parts to us. If you have questions, please call or e-mail us.

## Free Parts Evaluation and System Recommendation

Service Requested				
Calculations only	Full Feasibility Tes	t* Process	Development	
(with budgetary estimate)	(for formal quotation	on) (fee-base	d service)	
"Please include several parts and all other materials necessary to complete your finished samples.				
Your Information				
Name:	Sta	ate/Prov:		
Title:	Po	stal Code:		
Company:	Co	ountry:		
Address 1:	Ph	Phone:		
Address 2:	Fa:	Fax:		
City:	E-I			
Process Information				
Annealing Brazing	Curing	orming 🛛 🖵 Fusing	Cath. Tipping	
Hardening Hat. Testing	Plastic Reflow	hrink Fitting 🛛 🛛 Soldering	<b></b>	
Describe your end product:				
Part Details: $\Box$ Drawing, sketch, photo attached $\Box$ Parts included				
How do you hold the parts during heating?				
Are there other requirements we should know?				
Performance Data				
Materials to be heated:	Procent Poculto	Dresent	Deculto	
Hardness depth:	Method	Method	Method: Ambrell Induction Heating	
Weight:	Cycle Time:	Method.	Method: Ambreil Induction Heating	
Solder/Braze/Flux used:	Heating Time:	Heating	Heating Time:	
Rockwell hardness:	— Temperature:	Tempera	Temperature:	
Water Cooling: Induction heating requires a source of cooling water; do you have in-plant cooling?				
☐ Yes; please quote a water-to-water system ☐ No; please quote a water-to-air cooler				
□ No; please quote a standalone chiller □ No, please quote a tower cooling system			ooling system	
No, please quote a dry cooling and trim chiller system				
Line voltages: 🖵 360-520V 3Ø 🖵 220V 3Ø 🖵 110-220V 1Ø 🖵				
What is the most important thing we need to do for you?				
When do you need the solution?				
For more information				
contact up today at 1 595 990 0000				
or visit thelab.ambrell.com				





## **Training from THE LAB**

Enhance your professional skills in the use of induction heating systems through our PRO Skills webinar training program.

This exclusive program, designed by Dr. Dahake, includes a wide array of courses from basic fundamentals to optimizing your power supplies.

As part of our commitment to provide a great customer experience you now have access to virtual training that's convenient, easy-to-follow and interactive. And after finishing a PRO Skills webinar course, each participant will be awarded a Certificate of Completion.

### Our most popular webinars are:

#### Induction Heating Fundamentals



In this introductory webinar, you will learn about the fundamentals of induction heating. An experienced applications engineer will review sources of heat, induction theory, coupling of the work piece, frequency of operation, power calculations and simulation problems.

Practical examples will be provided throughout the course.

#### Advanced Induction Heating: Coil Design



Building on the introductory webinar, this session will showcase several coil design case studies. You will also learn about the differences between square and round coils, insulation and encapsulation, and coil calculations.

#### Advanced Induction Heating: Brazing and Soldering



This educational webinar will review induction brazing and soldering, including the benefits of using induction for these two applications, important considerations to ensure success, and several real-life case studies.

## A Wide Range of Systems for Many Applications

Our EASYHEAT<sup>™</sup> and EKOHEAT<sup>®</sup> induction heating systems are right-sized for a multitude of applications. Whether heating nanoparticles, forming tiny medical devices, preheating large turbine blades or welding undersea pipe for the oil and gas industry, we can help improve your process.

Delivering power from 50 watts to 1000 kilowatts over a frequency range of 2 to 400 kilohertz, we can deliver the optimal solution for your heating challenge.

## **Flexible Solutions**

Our systems allow for the placement of the power supply to be up to 200 feet from the work area and have a small footprint, or they can be integrated into a fully automated production process.

## **System Features and Benefits**

- · Heats only your part; reducing wasted energy
- Easy-to-use display and control interface
- Movable workheads for versatile integrations
- 100% duty-cycle for demanding, automated processes
- · Auto-tuning heats parts of many sizes, compositions and geometries
- Automation-ready with digital, 0-10 volt and 4-20 mA I/O
- RS 485 interface for serial control, monitoring and data logging
- $\boldsymbol{\cdot}$  eVIEW software for temperature and process monitoring
- Accepts a range of international mains voltages
- Configurable heating profiles for semi-automatic control and process management
- Range of water-cooling systems for varying ambient conditions
- CE marked













#### **About Ambrell**

Founded in 1986, Ambrell Corporation, an inTEST Company, is a global leader in the induction heating market. We are renowned for our application knowledge and engineering expertise. In addition, our exceptional product quality and outstanding service and support are at the core of our commitment to provide a superior customer experience.

We are headquartered in the United States with additional operations in Europe including the United Kingdom and the Netherlands. All Ambrell products are designed, engineered and built at our manufacturing plant in the United States, which is an ISO 9001-certified facility. Over the last three decades we have expanded our global reach through an extensive distribution, channel partner and OEM network. Today, we have more than 18,000 systems installed in over 50 countries.



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