

ceramicx

# HEATWORKS

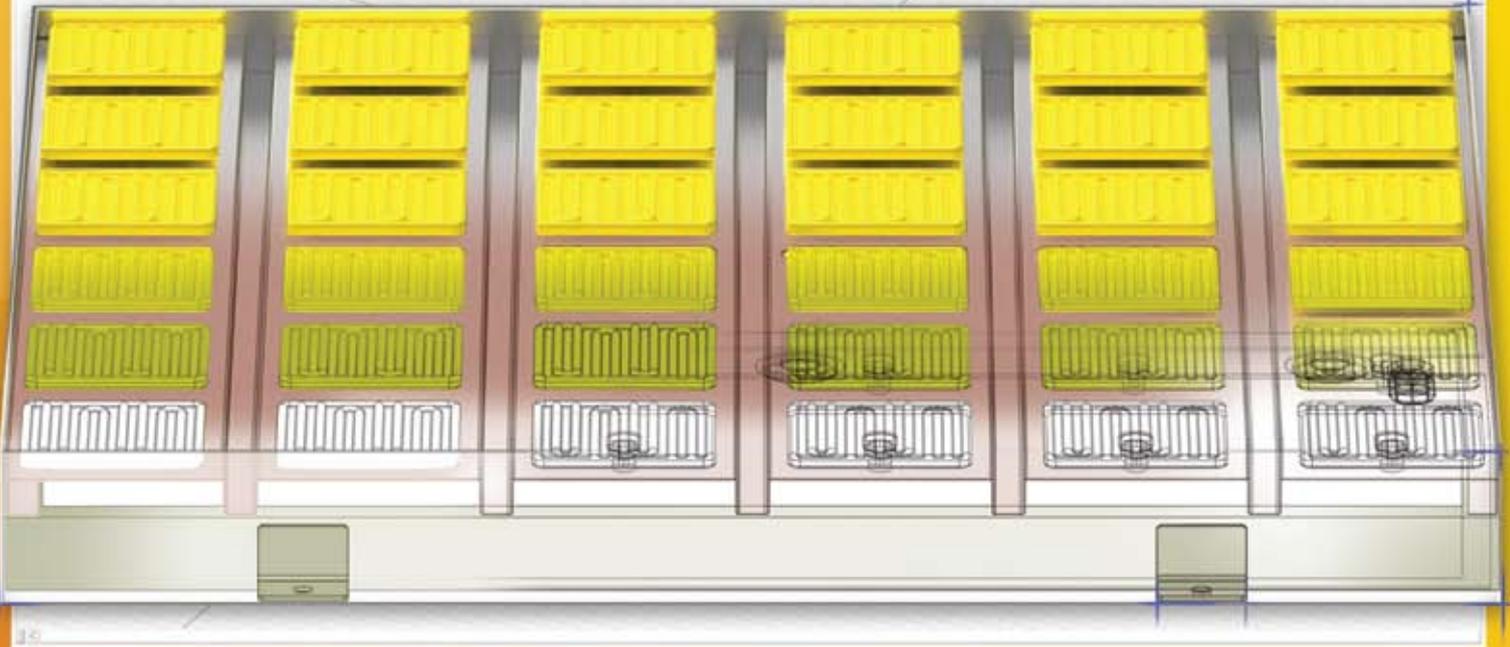
ISSUE 3 JUNE 2011

**E X P A N D**

YOUR ENGINEERING  
**MODELING**  
CAPABILITY

WITH THE

**SPACECLAIM**  
3D DIRECT MODELING  
SOFTWARE



## WEALTH CREATION

*join the meitheal*

**INFRARED** A WHOLE NEW HEAT  
FOR APPLICATIONS ENGINEERING  
**GENERATE NEW BUSINESS**  
FROM YOUR WEBSITE

“...We have triple-A rated fridges, fuel efficient cars, but energy hungry machine tools are not even considered.”



**HEATER EFFICIENCY**

*David Russell gets*

**“BACK TO BASICS”**



**IF YOU THINK ALL ELEMENTS  
ARE CREATED EQUAL**

09101316274

Unique  
serial number

Model FTE

Coil Integrity

PASS

Coil Watts 650

Flash test

PASS

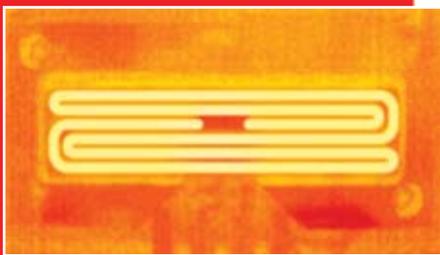
**THINK  
AGAIN**

Every ceramic element we produce is tested, laser etched with an individual traceable serial number and backed up with a data bank of quality assurance information.

Thermographic image

Coil loading

PASS



Approvals

ceramicx

CE R

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# HEATWORKS

## Communication for success

In business we are always looking for that elusive essence of successful activity to create wealth.

On more pedestrian levels, the successful enterprise is trying to bottle up various ideas and practices. A good business will continually examine and strengthen what works for it - and get rid of what doesn't.

At a shop floor and operational level, this means a continual eye on absolutes such as quality; cycle time; inventory; and performance in an ever more effective manner while also analysing and eliminating areas of dead time and space.

In sales, the 80:20 rule might apply: We let o...000ur successful patterns of business alone and we focus mainly on our challenges and more difficult orders - which usually provide the key to future success.

And for serious levels of growth and innovation we have to be prepared to fully open our world - and take our communications work seriously. Sometimes this activity might go by a marketing kind of name - but great communications is the essence of what creates wealth.

The word communication - naturally enough - comes from the same root as community. Without a community, constituency or shared area of interest, communication is a difficult thing.

When we launched HeatWorks magazine in Autumn 2010 our hope and aim was to help bring forward a community: We believe that our continuing investment in HeatWorks is helping all the while to create the shape and location of that community and to help answer its needs.

Our communications work at Ceramicx has come to be, in essence, a tool that helps us define new corners and new boundaries in our marketplaces and in the infrared heating world.

HeatWorks magazine has also helped us learn again that effective communication and effective business is a two way street: In other words, there is no successful communication without a community, and there is no successful communication without listening. Successful applied science and successful engineering only arise when the supplier has listened thoroughly - and communicated back to the customer the essence of his/her need.

In that spirit I invite you to communicate with us at Ceramicx - to let us know your infrared heating issues and needs and let us listen and perhaps help communicate them further.

Your taking part will certainly help energise a community of interest that has more growth, more potential and more business success available than it currently realises.



**Cáthál Wilson**  
 Project Manager Ceramicx Ireland



# WEALTH CREATION - *join the wealth*



*Ceramicx is honoured to be one of the small to medium manufacturers involved in the Irish government's twin initiatives in manufacturing effectiveness and in lean energy management.*

Below are some edited highlights of the speech given by Frank Wilson at the ICMR and I2E2 Technology Centres, launch in Dublin, 20<sup>th</sup> May, 2011 - where he joined key Irish manufacturers and Minister for Jobs, Enterprise and Innovation, Richard Bruton T.D. in urging industry there to grasp its opportunities.



Good morning Minister, Ladies and Gentlemen,

At Ceramicx we make a variety of infrared heating solutions for a great number of markets and applications; industrial and consumer. We provide employment for over 35 people directly – and rising – and we export 98% of our infrared heating systems and components to over 68 countries.

Last year was a very big year in our 19 year history: we set out to increase our international profile and expand our turnover. We invested in our marketing – we launched a magazine for the industry – Heatworks – we invested in our website – translated into 11 languages for our customers – we exhibited at the triennial worldwide plastics exhibition in Düsseldorf, Germany and we succeeded in growing our turnover by nearly 20 percent. See our website [www.ceramicx.com](http://www.ceramicx.com) for more detail

This year we are building on those gains and coupled – with a fresh push in research, engineering and innovation – we expect to achieve the same growth or greater than 20%.

Ceramicx find that we are one of two Irish manufacturing SMEs involved in the work of the new centres thus far.

The truth is that the number of successful owner-managed manufacturing SMEs in Ireland is very small – dwarfed by other sectors – agriculture and tourism being the chief ones – dwarfed by international manufacturing and service organisations and dwarfed by public sector and professions.

This work with the new centres will develop a rise in the performance and number of successful owner managed SMEs. We in Ireland sorely need more than ever before more successful owner managed businesses that create wealth.

We – the new centres need to inspire a generation of business leaders and companies who are prepared to put their heart and soul into what they do – who are prepared to create value and wealth. It really is no



(left) Company representatives from all the companies involved with I2E2 and ICMR (right) Mr Richard Bruton T.D. Minister for Jobs Enterprise and Innovation, Mr Frank Wilson M.D. Ceramicx Ireland Ltd. and Mr Barry Kennedy C.E.O. of I2E2 and ICMR



Minister Richard Bruton discusses the strength and possibilities for Irish exporters

accident that the fabrics of most successful economies – certainly in Europe – are based on plenty of strong owner managed firms in the SME category. Like agriculture and tourism they are bed rock industry anchored to location, culture and community where hindrance and ignorance is disposed of because the local communities value the local employment. The most successful economy – Germany – is still steeped in the culture of the Middlestand

We know many of these SME companies in Europe first hand – as associates, partners and competitors. Believe me, the business methodology and approach to markets is sound. The retained wealth within these companies affords stability and opportunity.

When we look at our own economy in recent months, hindsight is surely illuminating? Investment can also be described as a wonderful thing but – as we well know – just as shares fall and rise – investment can also leave as it belongs to no location culture or community. Therefore – in my view, further benefit of the work of these centres will also help to relieve us of the notion that money creates wealth. We know now – a harsh lesson – that it's simply not true. Good manufacturing ideas – implemented by people who are skilled, focused and courageous create wealth. Taking opportunities creates wealth. Money – of itself – does nothing but it is "oh" so wholly necessary – ask the minister.

Our primary focus through the work of the centres remains the creation of prosperity and increase in jobs, sales and profit through the application of best industrial practice and optimum energy work and as a by product deliver Ireland economic stability (the end game).

We are perhaps fortunate – perhaps blessed with foresight that we have chosen two areas of engagement – two channels as it were – that are high in opportunity and potential for Irish Industry and for Ireland.

When it comes to our work on energy we are fortunate in that there is a lot to do in the world – and thanks to dwindling resources, it will have to be dealt with soon. For all the talk most manufacturers throughout Ireland and indeed the world have yet to make a serious impact upon the issue.

A plethora of schemes, incentives and a continuing media stream of environmental news and innovation does not appear to have instilled much progress to date.

The first energy sum – for anyone or any business – is simplicity itself: just add up your monthly output of products and components and then divide by your total monthly energy costs – utilities bills; electric, gas and so forth. What have you got? A quick and easy sum/ratio for your factory's energy/output – a ratio or % that you can track each month.

We are in business to make a profit. Before that happens it generally costs you to make something. Your energy use is a key part of that cost. The sad news is that if you have paid a premium for the power and utilities.....you make less money on your product. The good news, however, for us here and for Ireland – is that we are set to do something about it and means people have to "front up" and those that are creating the road blocks need to be dealt with in a most robust manner.

Consider this: How many manufacturing operations today can show effective and ongoing measurement of their energy



consumption? How many machines – presses – furnaces – can tell us what their actual energy consumption is? Per hour, per week, per month and most importantly – per part produced. We have triple-A rated fridges, massively fuel efficient cars, etc but energy hungry machines tools are not even considered.

*“ We have triple-A rated fridges, fuel efficient cars, but energy hungry machine tools are not even considered. ”*

This is our area of energy opportunity – and if we work hard, with creativity we can collaborate to make it Ireland's own - combined with low cost auto-energy production.

The easiest times – in work and in life – have not necessarily been the times of challenge, change and go forward. Sometimes it is necessary to make life difficult for ourselves in order to inspire new thinking, ideas and wealth creation. I am not suggesting making life difficult for its own sake, but I am talking about challenging the status quo in this country, where professionals and service providers are paid a great deal more than the industrialists who generate the money in the first place.

Attitude is all – and change is challenging. And when it comes to energy questions, most people and businesses – would rather focus on the negatives around the 'how?' rather than the 'why?'. Most feel defeated by the power of the utilities; the cost of machinery adaption; the cost of workplace awareness; the risk in innovation; the price of oil and the instability in world affairs. We can change this attitude and many other things with 'Innovation'

Our second area of focus in ICMR is raising our manufacturing effectiveness to improve our order winning capability with more profit dropping to the bottom line.

The good news is that much of Irish manufacturing is in fact already world class or on the way there – thanks in part to a lack of industrial baggage and the benefits of launching many things from a 20th Century green field.

A certain pedigree is therefore already in place. In many areas, for example, in plastics and moulding and manufacturing – for health care and medical work – we outclass our neighbours near and far.

We need to build on that now and take it forward. The 21st century presents difference challenges – competitive and cooperative, – energy intensive and reductive. We are a unique country – able to make a unique contribution. The best of our recent manufacturing can

be combined with the best of our collective traditions. The idea of Meitheal is surely never far off. A 'connection with neighbour' should be part of the spirit and the practice of the work of the centres.

Indeed – and let me just say this briefly – the idea of Irish manufacturing and Irish industry not working together in this way is really inconceivable.

The Centres will indeed equip Irish businesses to claw back and take gains from all the pre-emptive and efficiency improvement and low carbon actions that we can muster – but this embedded opportunity is the prize that we can move towards and keep our eyes upon. All of us – small and big – can contribute and all of us can gain.

We are accustomed to seeing the 'Made In Ireland' brand deliver in spades in a number of key areas – perhaps more in the consumer areas. We should in a similar fashion aim high for Irish Industry and Irish manufacturing.

We should plan and believe that our new centres can help carve out a reputation and performance that will deliver a great manufacturing brand in the same way.

"Made In Ireland" products are capable of showing the world what truly green credentials mean. Our Centres will help lead the way with applied science and with world-class business practices.

I invite you all to take inspiration from these initiatives and then to put your shoulder to the wheel and to become a part of the Meitheal. Ireland Inc. is and should be a stamp of approval and it should be defended just as well as we do with our Agriculture productions.

Go raibh mila maith agaibh!



(left) Mr. Mark Fitzpatrick, Research Administrator and Ms. Karen Jasinski, Operations Manager.

(right) Mr. Cáthál Wilson describes the possibilities and strengths that the Technology Centres offer SME's in Ireland.

# WECO LEADS THE US INFRARED REVIVAL



*In recent months Brett Wehner's Flint, MI-based Weco International company has been defying the overall economic gravity with a hugely impressive commercial performance. As supplier of key infrared componentry Ceramicx has been playing its part. Weco has also been ringing the US changes geographically - extending its reach into new markets.*

As ever, the proof of the pudding is in the eating - and Weco's latest US achievements have been built on a growing reputation in bespoke client work.

One leading international producer of disposable packaging items recently approached Weco for upgrade work on its thermoforming processes. The client required a complete upgrade on one of its main thermoforming lines. The Weco project scope included removal of the existing 160" calrod oven and control system and replace with an efficient ceramic top and robust panel heater bottom oven with integral clam style opening frame work. Ceramicx products and componentry were integral to the success of the project.

**Weco engineers succeeded in reducing the overall oven length from 160" to 80" resulting in immediate energy savings.**

**Cycles (shots per minute) were increased from 15.2 to 23.4, making Line 1 the fastest machine not only within the factory - but within the client organisation as a whole.**



Quality heaters combined with best-in-class Hetronik heat control system have all but nearly eliminated maintenance at the plant - with only 4 heater replacements in some 26 months of operation to date. In addition; downtime, scrap and heat-up times at the client factory have all decreased; resulting in a very quick return on investment.

Weco also performed the following upgrades at the client company: complete extruder controls, chrome roll, dancer bar accumulator. Supply and commission of a 3 axis Yaskawa servo control for the sheet index and tool platens.

The motion control package include the first ever Ethernet communication between the newest Yaskawa motion controller and AB Controllogix. In terms of operations the machine operator has complete machine visibility through two redundant 15" touch screen HMIs.

“ Brett Wehner says that *we are more than pleased with the professionalism, know-how and expertise displayed in this project. More than that, the results have been truly world class- Just imagine the ability to improve your current operation using half the energy!* ”

Frank Wilson, Ceramicx founder comments that 'using Weco/Ceramicx IR technology, improved heater design and engineered ovens this is no longer an idea but reality.' Wilson adds that 'although the problems of US manufacturing are well documented, in many ways American industry is the first to see and grasp the realities of commercial opportunity. Energy saving and energy-per-part will be the defining issues of the next decade. Weco and ourselves will be playing our part in bringing to the fore of American business.'

“ Ceramicx product quality is playing a key role in Weco's revival of US industry. Brett Wehner comments that *'Ceramicx supply - in ceramic, quartz and all across the board - is world class and the US market is benefitting from it. our customers not only have the pedigree of the componentry in action they also now have the online wherewithal to examine the exact heat parameters of each piece of infrared equipment that we supply.'* ”

Weco International has been trading in the USA since 1972 and for the past dozen years has been partnered by Ceramicx for all its infrared heating needs. ”



# .ceramicx\_online/

*The worldwide reach of Ceramicx has been made possible via a concerted and focussed investment in internet-led sales and marketing.*

*Granite Consulting is the expert partner. Here we tell the online story so far.*

## Generating New Business from your Website

Some business leaders believe that web commerce provides an opportunity only for consumer focused businesses. However in 2010, Ceramicx proved that recognising the importance of integrating online marketing into the communication strategy for a B2B focused company can have staggering results.

Back in 2009, Ceramicx had a very extensive suite of websites but were unhappy with the level of traffic and engagement being generated.. They, correctly, believed that they could deliver far more sales and leads than were being achieved. Recognising that a newly designed website which was localised into 10 languages and that Search Engines are a user's main gateway to information online, they asked Granite Consulting to undertake a thorough review of the website from a Design, Search Engine Optimisation and online visibility viewpoint. The result of the review was that we recommended a completely new, search engine friendly website.

We recommended developing a single, multilingual website with search engine friendliness at the core and launched this new site in early summer of 2009. The website was launched in 10 languages with a seamless navigation between languages and all sites localised based on search patterns in the markets of our target languages. 70% of searches online are not in English and for a business like Ceramicx where 98% of turnover is via exports, it is essential our multilingual campaigns are planned and executed correctly.

Since launching Ceramicx.com then they have undertaken several online marketing campaigns across every continent. We have also built a number of ancillary website's over the past 18 months to help our campaigns in specific markets where search engine patterns and cultural behaviour is very different. Localisation is key here and straight translations of English content will never maximise the potential of your website.

Prior to our involvement, Ceramicx.com was not ranked well in Search Engines, across any of its target markets for any of the main products or services they provided. In fact it was not appearing on page one (top 10 listing) in search results in any market for their main product category 'infrared heaters'. The following table shows the ranking for 'Infrared heaters' (or its corresponding translation) in 8 languages in the leading local search engine. This is a highly competitive term in each market and Ceramicx is now well on its way to page one rankings in all.

Granite undertook keyword research to uncover what were the most appropriate keywords to target aggressively for Ceramicx. What would their potential customers in each country be

searching for? These key phrases were not merely translated but were carefully chosen in each market.

An aggressive online marketing campaign commenced in October 2009 incorporating an SEO strategy, Google AdWords advertising campaign and intensive online PR. Ads were written for the Google campaign and were served up when people searched for any of the selected Key Phrases. Specific landing pages were built to optimise the results from each ad.

Traffic levels for the Ceramicx website rose immediately and after a few months was up by over 25%. By the end of the campaign traffic levels had grown over 240% year on year. This highly targeted traffic resulted in a huge increase in enquiries and leads helping Ceramicx grow turnover significantly and open up new markets.



The success of the Ceramicx campaign was a major factor in Granite being nominated for the prestigious National Enterprise Awards in Dublin in 2011.



With an eye on Ceramicx' plans for K-Show 2010 in Düsseldorf, another key feature of the online success was the building of a micro-site for the K Show in Germany. This website was tactical in many of our campaigns and delivered over 10,000 unique visitors alone in 2010. Not bad for a website with only about 5 pages of content!

## E-Commerce

Later in 2010 Granite added full ecommerce capability to the website. This allowed people to buy components directly from the shop in certain countries. The new shop has been a huge success with significant volumes of products being sold directly into UK and Irish markets. There is a wide range of products available with a very simple shipping policy. This combined with an optimised sales funnel has seen strong conversion already from the new shop. The online shop also reflects changing buying patterns and economic landscape in Ireland

Ranking	May 2009	Jan 2010	Dec 2010	May 2009	Jan 2010	Dec 2010	May 2009	Jan 2010	Dec 2010		
English Google.com	104	36	8	Arabic Google.ae	24	23	1	Portuguese Google.br	19	16	2
English Google.co.uk	83	61	14	Arabic Google.com.sa	23	22	2	French Google.fr	29	18	3
English Google.ie	19	17	1	Russian Yandex.ru	>500	>500	38	Spanish Google.es	84	19	10
German Google.de	>500	>500	21	Portuguese Google.pt	13	11	2	Italian Google.it	68	49	12



and the UK. Being able to order what you need at a time that suits you is of paramount importance: Recent statistics show that more and more online shopping in Ireland and the UK takes place outside normal business hours. Customers are generally busy people and taking your considered time over what to purchase can be a pleasure, but only if the time is actually available. We aim to deliver

20% of sales in the UK and Ireland via the shop this year.

## Quality Transparency

Another key element of Ceramicx' online strategy delivered last year was the ability to check the quality of each and every unique product that leaves the factory floor. Frank and the team have big plans for their new product quality control and assurance project, which was created in conjunction with University of Limerick. We are currently looking at new ways to develop the online application we have built to incorporate this seamlessly into the website and are very excited about it's power to help all distributors sell Ceramicx product in 2011.

This development truly shows Ceramicx Ireland's commitment to quality and to transparency. Customers have complete openness about the true quality of every Ceramicx Ireland manufactured product.

## The Future

Following on the success of our campaigns in 2010 we decided to increase our focus more around the solutions that are provided by Ceramicx and its products supporting the Distributor network for 2011. The goal is to establish Ceramicx' People and its Partners as the experts in using infrared heating technology and the Ceramicx Brand as the gold standard. Repositioning the Ceramicx brand from a manufacturer of Infrared elements to a provider of efficient infrared heating solutions will be at the core of the 2011 campaign. This will involve shifting the focus of our SEO and AdWords strategy to a new set of solution and application themed key-phrases.

This campaign began with a new website design which we have just delivered. This was delivered with a focus on the new, additional set of keyphrases.

The next steps of our development on the Ceramicx website will be to deliver an interactive Distributor Map which clearly highlights and promotes Ceramicx' partners in their target countries. The most important development however will be extending the Content Management system we have in place on Ceramicx.com to allow Partners

and Distributors access to control and market the various language specific websites without needing to run these changes through the Ceramicx team. This will be a hugely positive and forward step in allowing companies such as Ceramicx to really leverage their international distribution partners and enable them sell Ceramicx products into their home markets in a way they know their audience will feel most comfortable.

A new email marketing campaign and an aggressive blogging and social media campaign will be central to driving the range of products online to industry professional who need Ceramicx expertise. That and some online Voodoo.

These marketing activities are designed to position the Ceramicx Brand as the leading heating solution across a range of industrial applications.



Granite Consulting is a multi-disciplinary business consulting group established in December 2008. Our expertise is in the fields of Online Marketing and Website Development.

Our team of consultants have a track record for creating innovative web sites and online applications designed to suit our Clients' requirements.

Granite Consulting provides Internet strategic planning, online strategy development, website audits, web analytics, website development services and Advanced SEO in addition to Marketing outsourcing, IT infrastructural services and funding management.

## Search Engine Management

Engine Marketing At Granite Consulting we will build and implement a strategy to leverage your website investment and add to your business through online awareness.

## Search Engine Optimisation

Our Search Optimisation (SEO) services are varied and extensive with the objective of always achieving maximum visibility for our Clients online content in the SERP's (Search Engine Results Pages).

## Search Marketing Audit

The first step to being found in search engines is to know where you stand today. We offer audits that can help you establish the search engine strength of your website.

## Web Development

Our experience ranges from development of complex website functionality to web applications tailored to your individual business requirements.

## Pay Per Click Management

If you do not currently use search engine advertising, why not contact us and we will do a no obligation assessment of the potential benefits for your business.

[www.granite.ie](http://www.granite.ie)

9 Curragh Comm. Park, Marsh Road, Skibbereen, Co. Cork

Bld 1000, City Gate, Mahon, Co. Cork



### Some Ceramicx facts ( Q4 2010 v Q4 2009 )



### General online facts

**82%** of internet traffic gets to its destination via a search engine

Google is not the dominant search engine in every market

**70%** of web searches are not in the English language

**3rd** If Facebook was a country it would have the 3rd largest population in the world



# LET'S GO SHOPPING!



(left) Johnny our local postman and Amanda

in cardboard boxes, then these elements are placed in an outer box with Styrofoam sheets placed on the bottom and top to prevent shock to the elements if the box is dropped in transit.

### *What typical enquiries might you get in the course of a month?*

Typical enquiries would usually be replacement parts for machines for example; ceramic elements, quartz tubes and bulb heaters.

### *Is there a minimum order size?*

No there is no minimum order quantity but to justify the cost of shipping a customer would probably be better to order at least 10 pieces.

### *Is there a maximum order size?!*

Normally maximum weight of shipping would be 30kgs in one box. Shop orders typically are not large as they are usually the replacement parts.

In contrast to that, larger orders are handled by our sales team and to contact sales please e-mail sales@ceramicx.com

### *What can I purchase from Ceramicx on-line shop?*

Customers can purchase all of our products which can be seen on our website except for engineering and be-spoke projects.

### *Do all orders have to go through the computer - or can I ring up and order? Do you take credit cards?*

All shop orders are generated on our website directly and are paid by credit card only.

### *How does the currency conversion Euro/ Sterling work?*

A customer can select either sterling or euro on our website, which ever currency they choose that is the currency the order will be processed in.

### *Do I have to use PayPal if I'm ordering online?*

No we do not use PayPal our system runs with Realex in conjunction with our bank AIB.

### *Can I use the shop if I'm a customer, say, for other aspects of Ceramicx work - Eg thermoforming platens or ovens?*

No, any orders concerning platens or ovens are negotiated with the sales and engineering departments to ensure that all the correct specifications and requirements are met to suit our customer needs.

### *What seems to be the most popular infrared heating order at the moment?*

Ceramic elements at present seem to be the most popular, but this varies from week to week.

*Internet technology has also made the Ceramicx shop possible. Shop manager, Amanda Murphy sets out the stall and explains how the ordering process works.*

### *Tell us a bit - or a lot! - about yourself please - your education and training - and how you come to be at Ceramicx..*

I graduated in Business Administration from Cork Institute of Technology in October last year. My course consisted of the following modules; Public Relations, Project Management, Human Resources, Web Applications, Database Systems and Management Information Systems.

My past work experience entailed working in local factories near my home in Castletownbere in West Cork. I worked on the production line as part of a team and I also had the experience of dealing directly with customers when I got promoted to the office.

I also worked in Cork University Hospital as part of my third year degree as a Ward Clerk and my duties involved accountability of patient records, filing and organizing patient notes.

### *How do online orders normally get processed at Ceramicx?*

Our online shop remains open 24 hours a day seven days a week. A customer can access our shop by going to our website www.ceramicx.com and selecting the shop icon.

They can then select the type of product that they are interested in for example; Ceramic Elements, Quartz Elements, Quartz Tungsten, Projector and Reflectors, Accessories and Devices and Books. The next step for emitter orders is determining wattage, voltage, colour, quantity and currency.

Our customers can pay by credit card and when we receive the confirmation e-mail to our sales account sales@ceramicx.com the purchase order is printed and processed. All shop goods are in stock and go straight to packing and shipment with DPD or by Post (An Post)

### *What kind of delivery systems does Ceramicx offer? Eg standard service - postal service - courier?*

For the shop orders we have two types of transport, either by Post (An Post) or by DPD. This is because the shop orders tend to be smaller.

We ship by air, ocean or road depending on the size of the shipment, customer location, requirements and orders.

### *What kind of packaging is used in the transportation of orders?*

Again this depends on what is being shipped, for shop orders we pack the elements

# CERAMICX STANDARD PRODUCT RANGE



**LFFE** Large Full Flat Element

Drawing No. 050203A  
245 x 95mm (9.65" x 3.74")  
300W - 1500W



**LFTE** Large Full Trough Element

Drawing No. 050203B  
245 x 110mm (9.65" x 4.33")  
300W - 1500W



**FFE** Full Flat Element

Drawing No. 190401B  
245 x 60mm (9.65" x 2.36")  
150W - 1000W



**FTE** Full Trough Element

Drawing No. 130201A  
245 x 60mm (9.65" x 2.36")  
150W - 1000W



**HFE** Half Flat Element

Drawing No. 190401C  
122 x 60mm (4.8" x 2.36")  
125W - 500W



**HTE** Half Trough Element

Drawing No. 130201B  
122 x 60mm (4.8" x 2.36")  
125W - 500W



**QFE** Quarter Flat Element

Drawing No. 190401D  
60 x 60mm (2.36" x 2.36")  
125W - 250W



**QTE** Quarter Trough Element

Drawing No. 050203C  
60 x 60mm (2.36" x 2.36")  
125W - 250W





Drawing No. 190401A  
122 x 122mm (4.8" x 4.8")  
150W - 750W

**SFSE** Square Flat Solid Element



Drawing No. 050203G  
122 x 122mm (4.8" x 4.8")  
250W - 800W

**SFEH** Square Flat Element Hollow



Drawing No. 080702E  
245 x 60mm (9.65" x 2.36")  
150W - 800W

**FFEH** Full Flat Element Hollow



Drawing No. 050203H  
122 x 60mm (4.8" x 2.36")  
125W - 400W

**HFEH** Half Flat Element Hollow



Drawing No. 181207A  
60 x 60mm (2.36" x 2.36")  
125W - 200W

**QFEH** Quarter Flat Element Hollow



Drawing No. 050203I  
60 x 60mm (2.36" x 2.36")  
150W - 250W

**QCE** Quarter Curved Element



Drawing No. 27602A  
245 x 60mm (9.65" x 2.36")  
150W - 1000W

**FTE-LN** Full Trough Element - Long Neck



**Cerix Thermocouple**

Drawing No. 050203F  
Ceramic element with built in  
**Thermocouple K type**  
Standard

**Thermocouple J type**  
Standard



Drawing No. 050505G  
285 x 60mm (11.22" x 2.36")  
150W - 1000W

**FTEL** Full Trough Element Long



**ESE Ceramic Bulbs**



**ESEB** Drawing No. 240907MA  
Dia 64 x 137mm (Dia 2.52" x 5.39") 60W - 100W

**ESES** Drawing No. 240907MB  
Dia 80 x 108mm (Dia 3.15" x 4.25") 60W - 100W

**ESER** Drawing No. 240907MD  
Dia 95 x 140mm (Dia 3.71" x 5.52") 100W - 250W

**ESEXL** Drawing No. 240907MC  
Dia 138 x 135mm (Dia 5.43" x 5.31") 300W - 400W



**FTEL-LN** Full Trough Element Long - Long Neck

Drawing No. 170805A  
285 x 60mm (11.22" x 2.36")  
150W - 1000W





Drawing No. 060201A-R2  
247 x 62.5mm (9.72" x 2.46")  
250W - 1000W

**FQE** Full Quartz Element



Drawing No. 060201B-R1  
123.5 x 62.5mm (4.86" x 2.46")  
125W - 500W

**HQE** Half Quartz Element



Drawing No.060201E-R1  
62.5 x 62.5mm (2.46" x 2.46")  
125W - 250W

**QQE** Quarter Quartz Element



Drawing No. 100101A-R2  
247 x 62.5mm (9.72" x 2.46")  
250W - 1000W

**PFQE** Pillar Full Quartz Element



Drawing No. 050203L  
123.5 x 62.5mm (4.86" x 2.46")  
125W - 500W

**PHQE** Pillar Half Quartz Element

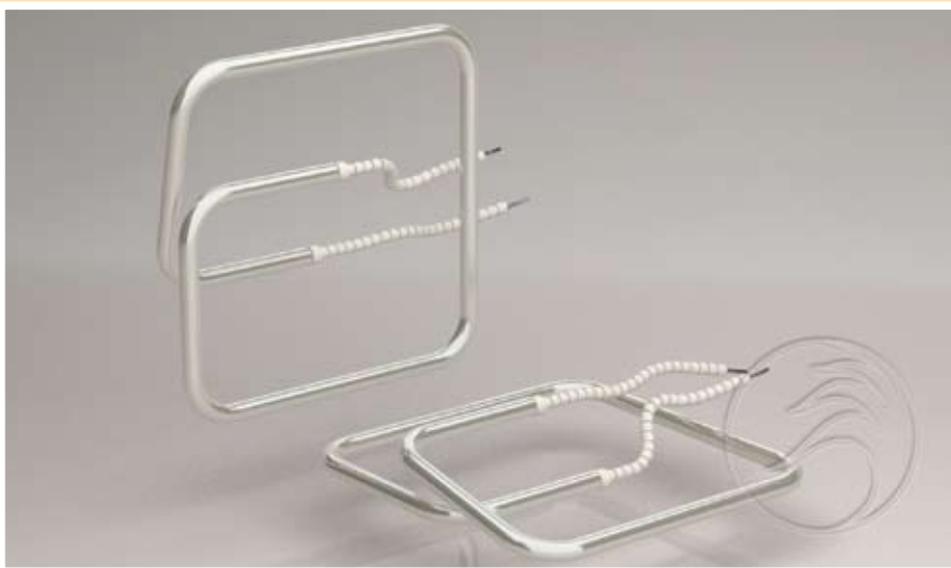


Drawing No. 050203M  
123.5 x 123.5mm (4.86" x 4.86")  
150W - 1000W

**SQE** Special Quartz Element



Heater Type **FQE, HQE**, with  
**Thermocouple K** in centre tube



**STQH**

Single Tube Quartz Heater

**100 x 100mm** (3.94" x 3.94")  
Drawing No. 220202A  
150W - 400W

**112 x 112mm** (4.41" x 4.41")  
Drawing No. 040401C  
150W - 400W

**140 x 140mm** (5.51" x 5.51")  
Drawing No. 080302D  
150W - 650W

**150 x 150mm** (5.91" x 5.91")  
Drawing No. 130600A  
150W - 650W



<b>QTS</b>	Quartz Tungsten Short	Dia. 10 x 224mm (Dia. 0.39" x 8.74")	Drawing.No. 150601S	750W / 240V
<b>QTM</b>	Quartz Tungsten Medium	Dia. 10 x 277mm (Dia. 0.39" x 10.91")	Drawing.No. 150601A	1000W / 240V
<b>QTL</b>	Quartz Tungsten Long	Dia. 10 x 473mm (Dia. 0.39" x 18.62")	Drawing.No. 140601A	2000W / 240V



<b>QHS</b>	Quartz Halogen Short	Dia. 10 x 224mm (Dia. 0.39" x 8.74")	Drawing.No. 150601S	750W / 240V
<b>QHM</b>	Quartz Halogen Medium	Dia. 10 x 277mm (Dia. 0.39" x 10.91")	Drawing.No. 150601A	1000W / 240V
<b>QHL</b>	Quartz Halogen Long	Dia. 10 x 473mm (Dia. 0.39" x 18.62")	Drawing.No. 140601A	2000W / 240V

### Quartz Halogen Heaters

Range of different sizes      Range of wattages and voltages      Available in clear and coloured glass  
 Range of termination options      Available with gold and ceramic reflective coatings



### FastIR 305

Drawing No. 041103B  
 305 x 305mm (12" x 12")  
 Fitted with 1000W quartz tungsten/halogen heaters (QTM/QHM)

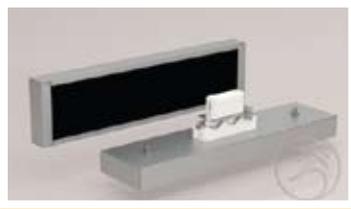
**4 TUBE - 4KW      5 TUBE - 5KW**

### FastIR 500

Drawing No. 041103A  
 500 x 500mm (19.7" x 19.7")  
 Fitted with 2000W quartz tungsten/halogen heaters (QTL/QHL)

**6 TUBE - 12KW      7 TUBE - 14KW**





247 x 62 x 60mm  
(9.7" x 2.44" x 2.4")  
300W - 230/240V

**PFAE** Pillar Full Anodised Element



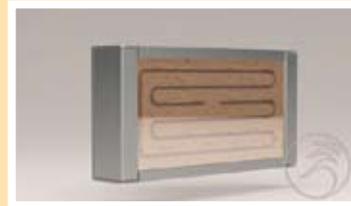
122 x 62 x 60mm  
(4.8" x 2.44" x 2.4")  
150W - 230/240V

**PHAE** Pillar Half Anodised Element



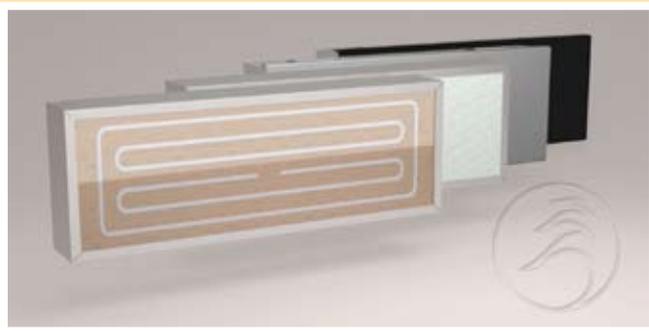
247 x 62 x 60mm  
(9.7" x 2.44" x 2.4")  
650W - 230/240V

**PFRE** Pillar Full Robax Element



122 x 62 x 60mm  
(4.8" x 2.44" x 2.4")  
325W - 230/240V

**PHRE** Pillar Half Robax Element



**Panel Heaters**

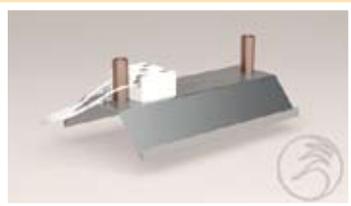
Available with surface face of anodised aluminium and glass

Range of different sizes available

Range of wattages available for varying supply voltages

Multizone options with removable miniature thermocouple plug

Electrical connection via threaded stud terminal, connector block or flag terminal



**RAS STANDARD**  
ALUMINISED STEEL  
REFLECTOR  
supplied **without heaters.**



**PAS STANDARD**  
ALUMINISED STEEL  
PROJECTOR  
supplied **without heaters.**

<b>RAS 0.5</b>	Drawing No. 201102A 100 x 60 x 160mm (3.94" x 2.36" x 6.30")
<b>RAS 1</b>	Drawing No. 300600A - R1 100 x 60 x 254mm (3.94" x 2.36" x 10")
<b>RAS 2</b>	Drawing No. 050203U 100 x 60 x 504mm (3.94" x 2.36" x 19.84")
<b>RAS 3</b>	Drawing No. 031201A - R1 100 x 60 x 754mm (3.94" x 2.36" x 29.69")
<b>RAS 4</b>	Drawing No. 050203V 100 x 60 x 1004mm (3.94" x 2.36" x 39.53")
<b>RAS 5</b>	Drawing No. 220601A - R1 100 x 60 x 1254mm (3.94" x 2.36" x 49.37")

<b>PAS 1</b>	Drawing No. 050203W 94 x 76 x 258mm (3.7" x 2.99" x 10.16")
<b>PAS 2</b>	Drawing No. 111200A - R1 94 x 76 x 508mm (3.7" x 2.99" x 20.00")
<b>PAS 3</b>	Drawing No. 050203X 94 x 76 x 758mm (3.7" x 2.99" x 29.84")
<b>PAS 4</b>	Drawing No. 120700A - R 1 94 x 76 x 1008mm (3.7" x 2.99" x 39.69")
<b>PAS 5</b>	Drawing No. 050203Y 94 x 76 x 1258mm (3.7" x 2.99" x 49.53")



Drawing No. 100701A

QUARTZ TUNGSTEN / HALOGEN REFLECTORS

<b>QTSR</b>	Quartz Tungsten Short Reflector 247 x 62mm (9.72" x 2.44")
<b>QTMR</b>	Quartz Tungsten Medium Reflector 302 x 62mm (11.89" x 2.44")
<b>QTLR</b>	Quartz Tungsten Long Reflector 497 x 62mm (19.57" x 2.44")



Drawing No. 050203N

**CERAMIC BULB REFLECTOR**

Dia. 220 x 110mm  
(Dia. 8.66" x 4.33")



Drawing No. 161202A

**E27 EDISON SCREW BULB HOLDER**

Dia. 53 x 74mm  
(Dia. 2.09" x 2.91")



Drawing No. 050203O

**2P CERAMIC TERMINAL END BLOCK WITH STAINLESS STEEL FITTINGS**  
40 x 32 x 20mm  
(1.57" x 1.26" x 0.79")



Drawing No. 210803C

**3P CERAMIC TERMINAL END BLOCK WITH STAINLESS STEEL FITTINGS**  
62 x 32 x 20mm  
(2.44" x 1.26" x 0.79")



Drawing No. 050203O

**2P CERAMIC TERMINAL END BLOCK NO METAL FITTINGS**

40 x 32 x 20mm  
(1.57" x 1.26" x 0.79")



Drawing No. 210803C

**3P CERAMIC TERMINAL END BLOCK NO METAL FITTINGS**

62 x 32 x 20mm  
(2.44" x 1.26" x 0.79")



**R7S CERAMIC HOLDER FOR STANDARD QT/QH HEATER RANGE**



**FLAT CERAMIC BASE HOLDER FOR HALOGEN / TUNGSTEN HEATERS FITTED WITH A FLAT CERAMIC BASE**



Drawing No. 050203Z

**STAINLESS STEEL BUZZ BARS**

8 x 2 x 1000mm  
(0.31" x 0.08" x 39.37")



**STQH HOLDER FOR ALL STQH TYPE HEATERS**



Drawing No. 090103A

**MOUNTING BRACKET**

73 x 57 x 25mm  
(2.87" x 2.24" x 0.98")



Drawing No. 100501A

**STEEL WAVE SPRING AND CLIP SET**



**ONE PIECE SPRING / CLIP STEEL**

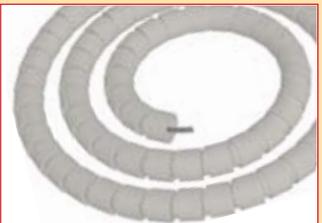


Drawing No. 060203A

**V CLIP AND SCREW SET**



**CERAMIC BEADS LOOSE**



**CERAMIC BEADS STRUNG**





**PUBSUN**

Pubsun with heater type FTELN in wattages up to 650W per heater. Suitable for indoor and outdoor covered use.

**PUBSUN 2** Drawing No. 111200A - R1  
96 x 76 x 508mm (3.78" x 2.99" x 20.00")

**PUBSUN 3** Drawing No. 050203X  
96 x 76 x 758mm (3.78" x 2.99" x 29.84")

Available in polished aluminised steel finish or coloured powder coat.

- Polished aluminised steel with white elements
- Cream with cream elements
- Black with black elements
- Red with white elements



**COMFORT IR**

1.3kW 230/240V or 120V High efficiency white glazed ceramic infrared elements.  
Choice of black powder coat or polished stainless steel finish   Minimum order of 6

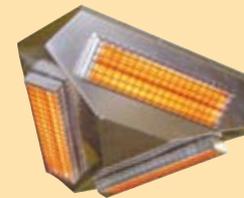


**COMFORT IR +**

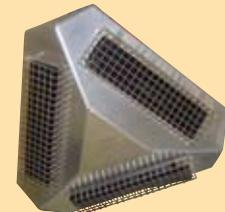
1.3kW  
230/240V or 120V  
High efficiency black glazed ceramic infrared elements.

Choice of black powder coat or polished stainless steel finish

Individually boxed with minimum order of 6



quartz elements



ceramic elements

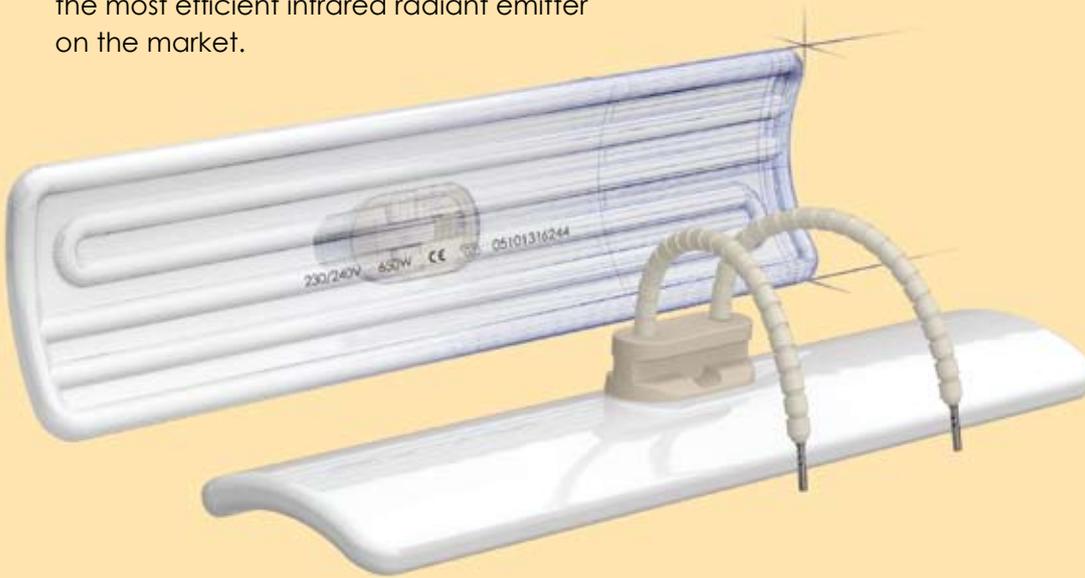
Available with high efficiency black glazed ceramic infrared elements or quartz medium wave elements

**COMFORT IR 360**

1.95kW 230/240V or 120V 450 x 450 x 160mm (17.72" x 17.72" x 6.3")

Ceramic elements operate in the temperature of 250°C to 700°C producing infrared wave-lengths in the 2 - 10 micron range. Most plastics and many other materials absorb infrared best in this range, which makes the ceramic heater the most efficient infrared radiant emitter on the market.

## FTE - FULL TROUGH CERAMIC ELEMENT



### Standard Features

Iron-chrome aluminium resistance wire

230V (other voltages available on request)

Useful wavelength range: 2-10 microns

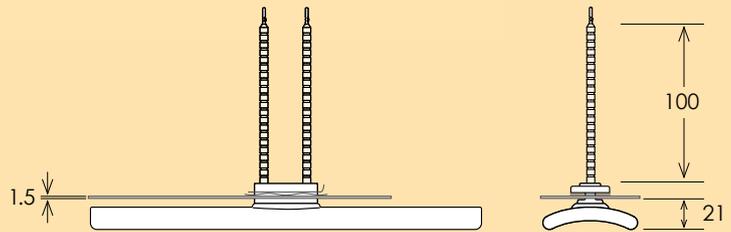
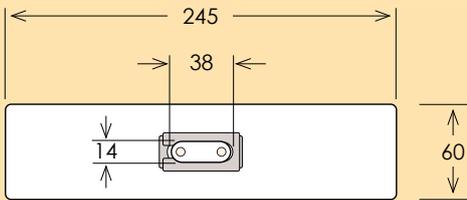
Average Operating Life: 5,000 - 10,000 hours

UL approved

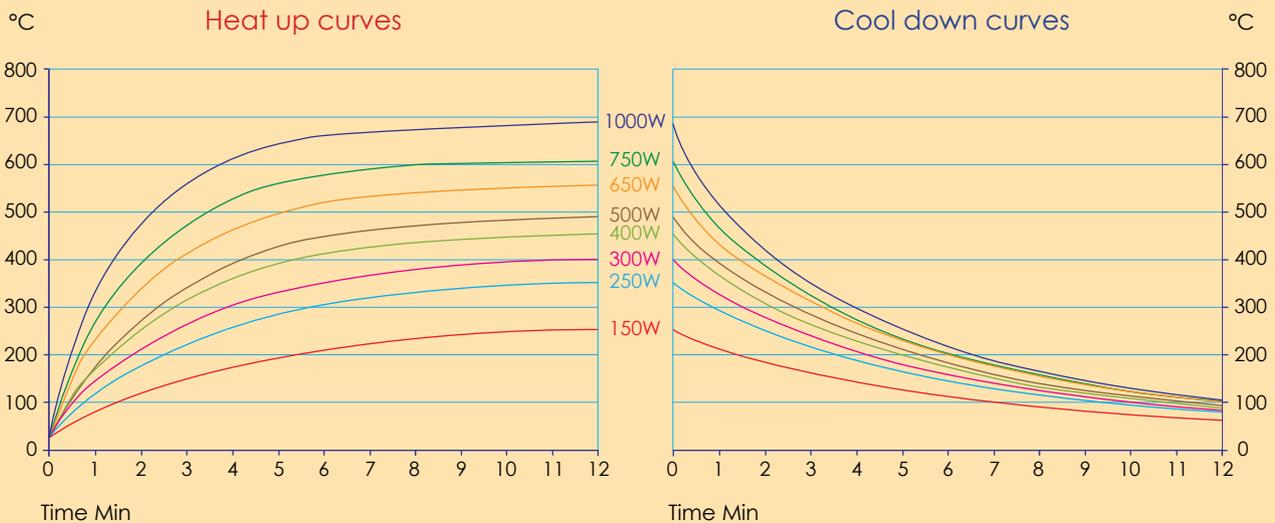
Supplied with spring clip

Individual serial number performance data for each ceramic element available online

Weight 180g



All dimensions in mm Recommended radiation distance (from heater to target material) 100 mm to 200 mm



Wattage	150W	250W	300W	400W	500W	650W	750W	1000W
Mean surface temperature	262 °C	354 °C	400 °C	464 °C	486 °C	589 °C	634 °C	722 °C
Max power density	9 kW/m <sup>2</sup>	15 kW/m <sup>2</sup>	18 kW/m <sup>2</sup>	24 kW/m <sup>2</sup>	30 kW/m <sup>2</sup>	39 kW/m <sup>2</sup>	45 kW/m <sup>2</sup>	60 kW/m <sup>2</sup>

Based on tests of average surface temperature with an infrared thermometer set at an emissivity of 0.9 (element mounted in an aluminised steel reflector, RAS) maximum approved operating temperature 750°C



# INFRARED - A WHOLE NEW HEAT FOR APPLICATIONS ENGINEERING

**Ceramicx When Ceramicx set out its stall in October 2010 at the triennial plastics exhibition in Dusseldorf the company received a record breaking 311 enquiries for its infrared heating expertise. Many of these were naturally for ovens and platens in plastics thermoforming. The majority of enquiries, however, were for a very varied plethora of needs and uses across many industries. Cathal Wilson reports.**

Whether the customer is blue-chip and international or small and local it seems to make no difference: The K show confirmed that first-hand user know-how about infrared heating technology is generally rare and is often limited in its scope throughout the manufacturing world. This gives us opportunity - but a great deal of work in creating the common technical ground upon which to do business.

To a certain extent, solutions are driven by the available technology and in that sense our infrared test rig for heating materials got plenty of use at the K exhibition. We used it to help many customers appreciate the differences between the main three different kinds of typical infrared heating and to demonstrate the effect that infrared heating has on various kinds of materials. ( *We still operate the rig at our factory - and HeatWorks readers are encouraged to send us their materials for infrared testing* ).



## PLASTICS

The bulk of Ceramicx infrared heating work in plastics for example is for the oldest part of the plastics processing industry - the thermoforming process - where plastics sheet material is

simply heated and then impressed or vacuum formed into products - many for the packaging sector.

Despite the lack of know-how, plastics manufacturing generally gets to solve its infrared issues. The fixed nature of the high value capital equipment in thermoforming generally means that the owners are incentivised to better understand their infrared heating.

Other manufacturing sectors, such as construction, metal fabrications or process/chemicals present different challenges. The same lack of understanding of IR as a heating technology can lead to the misuse of effort and equipment.

Whatever the job and whatever the materials the essence of IR heating involves three factors - absorption; transmission and reflection. The heating has to generate a source temp to generate an IR wavelength then have the ability to transfer that energy through emissivity to a target material - it is important to ensure that the electrical input is transferred to IR output in a very efficient, controllable and comprehensive manner. This is achieved by Ceramicx through the production of high quantities of infrared emissivity at a lower source temperature for the same electrical input.



## PROCESS INDUSTRIES & CHEMICALS

Infrared heating, for example, might be used in an emissions treatment plant. The process might require a certain intensity of IR radiation to bring the temp up to 800°C and so destroy dioxins. By contrast, evaporating a substance, for instance to reduce humidity in a plant location, more typically requires a source temperature of 1500°C to 2400°C

But - if in the case of dioxins - we started using a source temperature of 2500°C to create the watt density needed, the effective radiation would probably not hit the atomic structure of the gas that you are trying to destroy. With IR processes, we need to match the wavelength to the molecular bonds. It's a different kind of formula.

*“ IR is like a toolbox, but unfortunately, many engineering departments don't understand it...”*

IR is like a toolbox, but unfortunately, many engineering departments don't understand it and work backward from the thermal energy figures that they need. When IR is involved, that's only part of the story. The unwillingness to grasp the IR opportunity can result in the loss of resources - such as the pharmaceutical manufacturer still using a drum heater to dry ingredients, despite losing €5,000,000 a year.



## FOOD

Food - the production of food stuffs - is in some senses a part of the process industries worldwide. And although the microwave oven is commonplace



in households now, many food processors and manufacturers are still resisting the opportunity to use IR in the workings of their own operations. The same applies to large parts of the chemical and process industries - with large potential for better process optimization through IR - one example being the selective heating of components in reaction vessels in order to optimise reactions.

## BUILDING & CONSTRUCTION

Infrared heating can play a significant and cost-saving part in the area of building and climate control. We are currently in discussion with a leading University in Ireland about the combination of infrared and conventional convection heating in maintaining ambient temperature of buildings. A small outlay of various kinds of infrared energy at the edges of building systems can provide the user with massive savings in the deployment of ordinary convection heating.



One area where the industrial opportunity has been very well implemented in is the building products part of the sector - and via our German heating expert partner Friedr Freek (*please see page 19 for more on their recent successes*). The project provides leading manufacturer, BM Anlagenbau, with some leading edge production processes in order to make its innovative range of plastic coated concrete and stone products.

These specially treated concrete and stone products resist wear and tear; hold their aesthetic through the product lifetime, as well as being graffiti and vandal proof. The IR heating technology is increasing in popularity since it creates weather resistance and other aspects of ageing and thus extend product life and service life; reducing efflorescence and guarding against tyre abrasions, food, oil and chemical contaminations.

We learned a great deal from being part of this project - in designing the right array of elements and infrared emissions to suit - as well as engineering the infrared reflectors to provide exactly the right kind of heating for the concrete and give the whole system the right price/performance ratio. The high speed infrared heating also allowed the client to adjust the overall heating systems in a modular manner - minimizing space; helping changeovers, reducing production costs and improving competitiveness.

## PRODUCT FINISHING

Indeed, the use of infrared heat to dry and cure (in the broadest sense) a variety of paints and coatings onto various substrates is a key part of our work. In many cases the IR-based heat source provides changes in the chemical composition of materials involved, that goes well beyond the capabilities of ordinary convection heating. Ceramicx is talking to one

leading chemical major, for example, about making infrared production systems that will coat and seal a number of materials with a variety of infrared-heating and cured coated finishes. The applications here - and substrates of wood - plastics - metal, etc - are very wide - from furniture and building components to industrial uses.



## PRINTING

The printing industries share in this technology. Ceramicx is currently doing much drying development work in the print business. An ink drying process in high-speed printing requires phenomenal evaporation rates. This would typically call for the use of a twin-type IR heater: a short wave one for evaporation, and one with a medium wave output in order to cure the ink.

## METAL FABRICATION & TESTING

Infrared heating also has many underused applications in helping develop mechanical engineering and the behaviour of metals under stress. In the last issue of HeatWorks we briefly reported on work in helping one leading UK institute and blue chip OEM investigate the distortion of complex pressure vessel systems under varying thermal boundary conditions.

The UK university devised an approach using infrared heating as a means of creating the relevant heat loads and approached Ceramicx as a supplier of a bespoke heater assembly. We designed a 65KW, 56 element radiant heater system for application on the inner surface of 900mm conical vessels, giving the capability to vary the output power from each IR element individually.



In the next issue of HeatWorks we hope to be able to report on our IR work with a leading UK automotive OEM - in helping them use Infrared heating to make parts and components at increased specification and quality.



Metals are, of course, competing more and more with composite plastic parts in all corners of industry - aerospace and automotive included. Again, IR has a role to play; in providing greater accuracy of heat cure and materials change in creating newer and tougher composite structures.

*Whatever your end-use, your heating/ engineering need or application it is likely that we have related experience and resources to match. Please do not hesitate to get in touch.*



**friedr.  
freek**



## GERMAN VISION LEADS THE WAY

Ceramicx and German partner Friedr Freek exhibited together at the triennial K 2010 plastics fair, Dusseldorf last October. Since that time, the German manufacturing revival has continued to lead Europe to new manufacturing frontiers.

'Ceramicx sees that a part of this economic revival may be due to German industry simply bringing itself back to levels that predated the credit crunch,' says Cathal Wilson, Ceramicx Project Manager.

But Wilson adds that 'it's no accident that Germany has - by some way - the strongest SME and owner/occupier manufacturing culture in Europe, perhaps the world. German leadership and vision at this level have done much to steady their ship and reset their ambitions and their compass.'

Ceramicx has accordingly been extremely busy with German industry over the past six months; not only has the company been fulfilling German orders for standard infrared heating elements and components in ceramic, quartz and tungsten, but a good number of projects in applications engineering have come forward.

'German machinery and materials companies have both been visiting with us here at our factory in order to move their innovation forward with infrared,' says Ceramicx Founder, Frank Wilson. 'We are able to match our know-how to their needs for new kinds of machine building and new materials systems.'

Wilson adds that 'we cannot speak highly enough of our German partners Friedr Freek. Our working relationship has truly blossomed over the past nine years. The Freek order/enquiry conversion rate is truly world class. Such success is based on exceeding customer expectations - in terms of technological know-how and in commercial terms.'

Last year the Freek team celebrated its 60th anniversary and a glance at its website news shows a company in its prime: exceeding sales targets; forming new business partnerships and - in the same way as Ceramicx - contributing the SME perspective to the highest levels of its national government policy and thinking. In April 2011 Freek exhibited at the annual Hannover fair for the first time - and is

extending its marketing outreach in order to match the technical innovation in its heating portfolio. And while new applications engineering ideas are occupying the foreground,

existing Ceramicx/ Freek business has also been going from strength to strength. For example, BM

Anlagenbau - reported on in HeatWorks Issue 1 - has lately been investing further in infrared heating processes in order to satisfy demand for its innovative range of coated concrete and stone products.

The technology is increasing in popularity since it can resist weathering, vandalism and other aspects of ageing and thus extend product life and service life. Infrared heating has a key role to play; firstly in preparing the concrete and stone surfaces before the polymer paints are applied. Pre and post-spray infrared heating also eliminates the tendency for a developing film surface to 'bubble' and crack the surface of the coating. With two heat applications the material firstly evaporates from the substrate and then from the top.

For its part Freek manager Stefan Düllmann says that 'Ceramicx is the only company which manufactures the complete range of infrared heaters - long, medium and short wave. The elements are perfectly developed for each application, reasonably priced and available on short notice. Superb infrared technical support is always guaranteed.'

The whole Freek portfolio includes much more than the infrared heating. The company's product range shown at the K 2010 plastics show in Dusseldorf in October last year included Nozzle Heaters (HotMicroCoils); Cartridge heaters; Tubular heaters; IR elements; flat heating elements (panel heaters) in mica, silicon (incl. drum heaters), polyester and kapton and thermosensors and temperature controllers.

Both Ceramicx and Freek are completely committed to a low-carbon future and to fostering the same principles and operations with their clients, with energy-useage and monitoring and energy-per-part seen as a major factor in equipment construction and in manufacturing of any kind.



**friedr. freek**



# 3D DIRECT MODELING ACCELERATES CERAMICX CONCEPT & DESIGN WORK



Marcin Milczarczyk

In the quest for ever improved engineering processes, Ceramicx have expanded their engineering modeling capability with the SpaceClaim 3D Direct Modeling software. Marcin Milczarczyk, Lead Engineering Designer at Ceramicx, utilises the power of SpaceClaim for the design of heating platens, which encompasses platen replacements for cooking chickens, to the development of heaters for blood centrifuges, to testing the cowlings of jet turbines.

In search of a better solution for detail design and geometry-based work, Marcin discovered SpaceClaim when he saw that it was being utilized by numerous Rhino users, a popular surface modeling tool used for industrial design. Marcin uses SpaceClaim for 3D geometry creation and editing, sheet metal design, and general analysis work, and has found the ease-of-use of the software has enabled him to improve and increase the quality and rate of this design work. "SpaceClaim lets me bring designs to fruition four to five times faster than previous methods." SpaceClaim has made it simple to import geometry directly from SolidWorks and other CAD systems, significantly easing the process of making edits and updates to existing designs, as well as rapidly examining and creating new design concepts.



Not all Ceramicx heating platens are large this one is only 165 mm high

ras-001 reflector 0.75mm aluminised steel

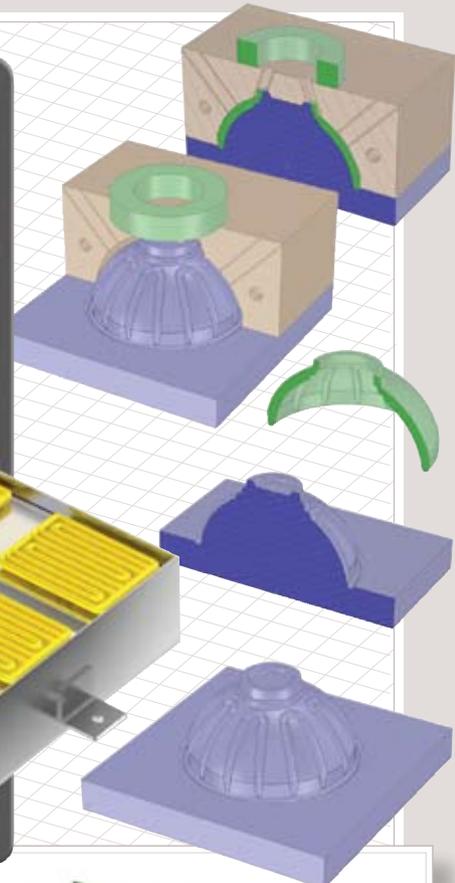
Create framework

Add fittings and electrical connection panel

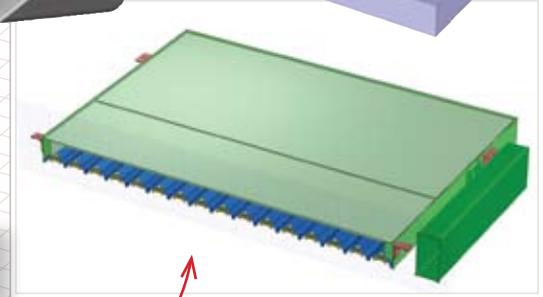
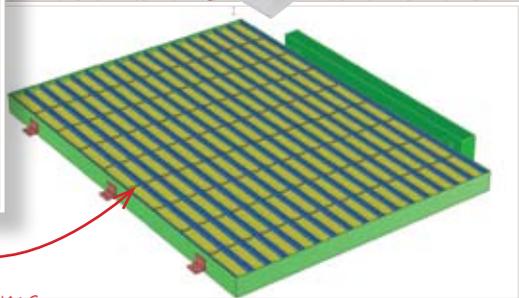
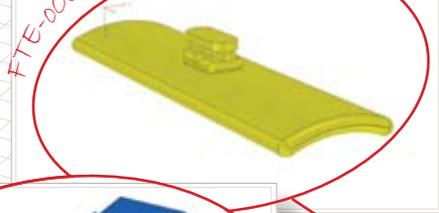
perforated aluminium back panels

Previously, Marcin had to request edits from trained CAD experts or struggle with CAD on his own, which was greatly disruptive to the creative process, slowed implementation of ideas, and consumed valuable time. SpaceClaim is ideally suited for engineering firms that want to facilitate faster and higher-quality product design and development by enabling the whole engineering organisation with the flexibility and control to capture ideas easily, directly edit solid models regardless of origin, and simplify designs in 3D for analysis, prototyping, and manufacturing.





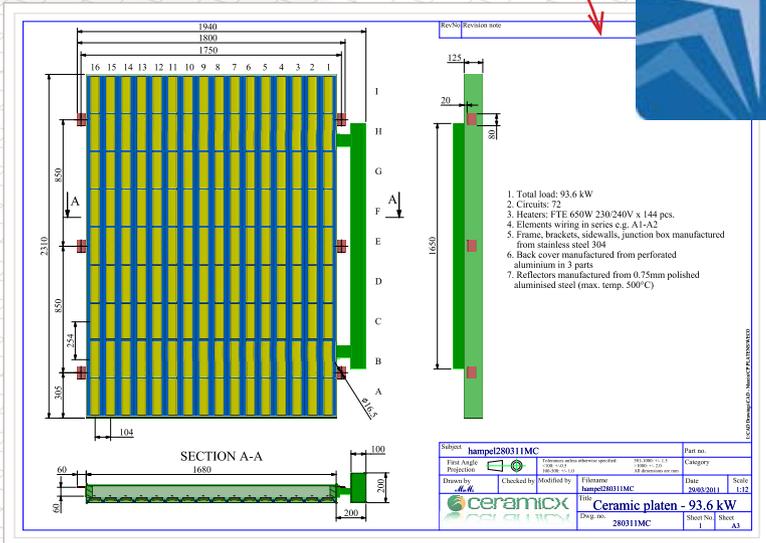
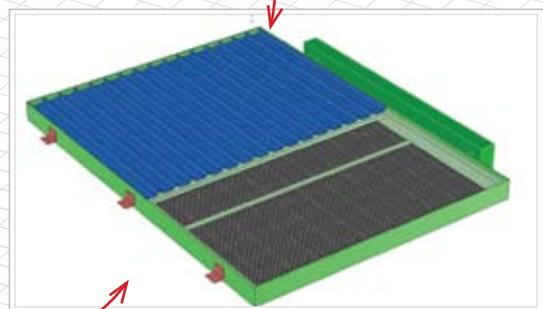
FTE-0001 650W 230/240V x 144-pcs



create detail sheets for customer and production



Import items from Ceramicx parts library





# LET'S TAKE IT BACK TO BASICS

*Edinburgh-based David Russell is an expert on heating in plastic thermoforming, having run a number of businesses in that sector and consulted to many more. Here he spells out the clear benefits of working with infrared source*

I managed a technical thermoforming company for 13 years and inherited 30 years of moulding technology. But even with this marvellous technical foundation it was sometimes difficult to remember the 'basics' of the thermoforming process. Daily fire-fighting and responding to customer deadlines would deflect attention away from a declining moulding performance and increasing costs. And when we tried to mould materials different to what we were used to we struggled. It took an outside 'force' in the form of Frank Wilson of Ceramicx to bring us back in line.

I first met Frank at the SPE European Thermoforming Conference in Ghent in 1998. Frank did a presentation on Infra-Red heating and the importance of reflectors – something we were unaware of at the time. Soon afterwards we changed to new elements with reflectors on our busiest machine and found we were back

in control of the process – uniform heating, much reduced cycle times and energy input – and better quality mouldings.

Now I am seeing the same problems in the market. One of the advantages of being an independent consultant is that you get to visit a diverse range of businesses with different products and different levels of technology. In 9 years, in every troubleshooting assignment, I have found problems with heating the sheet – sometimes lack of heat, sometimes huge differences in temperatures across the sheet and sometimes hot and cool spots – all leading to poor quality mouldings. Few of the moulders I have helped were aware of the decline in heater efficiency through time (see attached analysis) and most had platens with mixed efficiency elements – leading to increased cycle times and energy costs – something nobody needs in today's competitive marketplace.

Now, thanks to Ceramicx, we are again making moulders aware of the benefits of reflectors and the bi-annual replacement of all elements – and giving the process the necessary boost in efficiency and process control by getting "Back to Basics!"

Comparison of heater efficiency %



Heater type	Average life (hours)	age months (1 month = 440 hours)				
		0	6	12	18	24
Gas	6,000	45	25	13	7	-
Ceramic	15,000	62	55	49	43	38
Tubular rods	3,000	42	21	10	-	-
Coiled wire Nichrome	1,500	18	10	-	-	-

# ceramicx/news.....



Mr. Marcin Milczarczyk  
ENGINEERING SUPERVISOR.

## SPECIAL RECOGNITION

*The management of Ceramicx would like to thank and congratulate Marcin for the significant enhancement that he achieved for the Ceramic production process.*

## ENTERPRISE IRELAND ENVIRONMENT UNIT

Mr. Kyran Vallom from the Environment Unit of Enterprise Ireland recently completed an assessment of Ceramicx Ireland under the headings Effluent, Waste, Atmospheric, Storage, Noise and Site. Ceramicx was found be living up to its environmental responsibilities in a satisfactory way on all fronts.



Ceramicx has had a lot of engagement with one of the local Schools in recent times, Schull Community College. Frank Wilson and Cáthál Wilson hosted a tour from approximately 20 business students on Thursday 26 with their teacher Mr. Brendan Drinan. They spent 2 hours touring the facility and asking questions in relation to the manufacturing processes and the business of exporting 98% of products to over 65 countries worldwide.

Ceramicx recently presented its annual scholarship to attend Cape Clear Irish College to Diarmuid Dineen, pictured above with Cáthál Wilson, Projects Manager presenting the trophy at the schools annual awards ceremony.

The transition year students of the College have recently started a project translating the Ceramicx website to Gailge (*the Irish language*). We would like to thank all the students involved and their teacher Ms. Ann Marie Collins. This project will continue on an annual basis with more being done each year.



**10 YEARS**  
CERAMICX RECENTLY MADE AN AWARD TO MR. KRIS DEKA AND MR. MARTIN LINDEMANN TO THANK THEM FOR 10 YEARS OF SERVICE TO CERAMICX IRELAND.



Ceramicx Factory set below Mount Gabriel, in Beautiful West Cork.

Ceramicx Ireland Ltd. Gortnagrough, Ballydehob, Co. Cork.

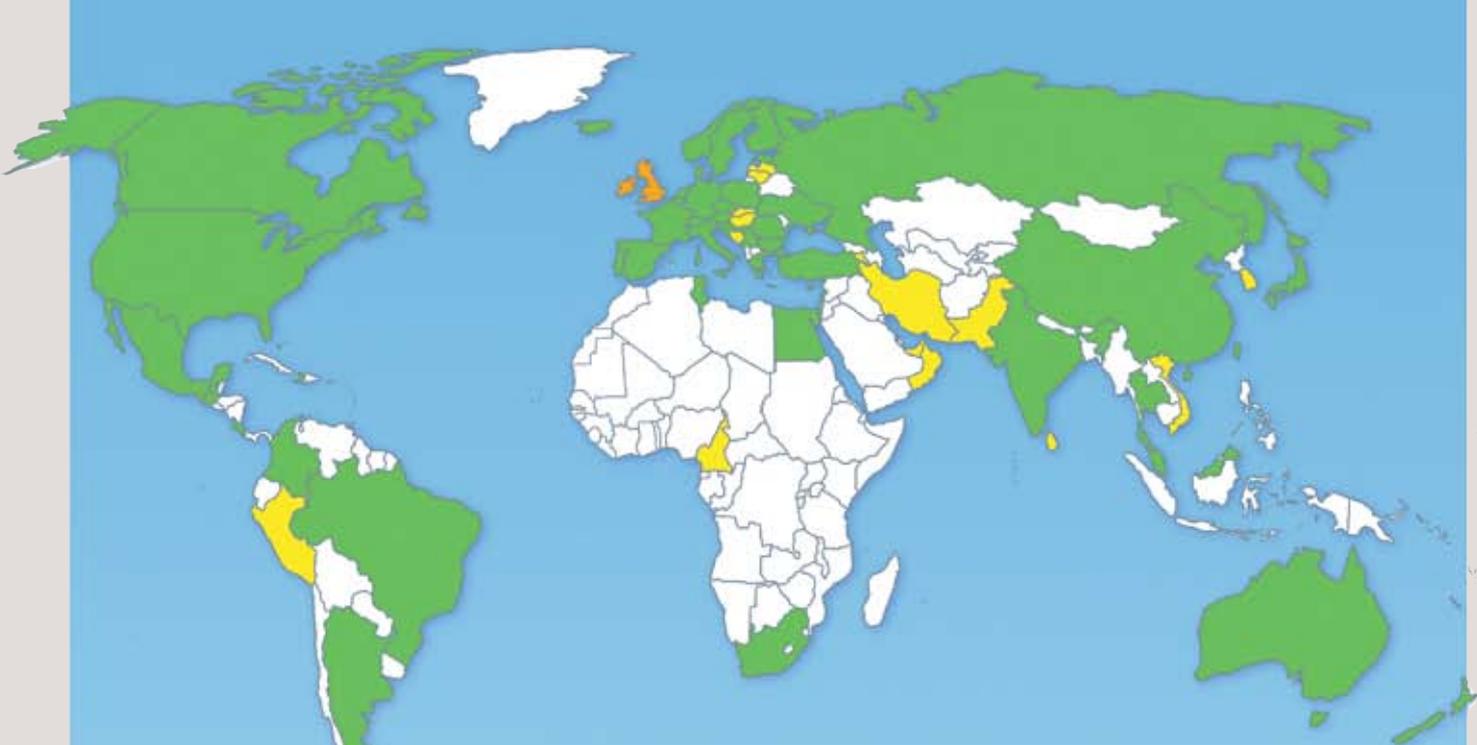
Ceramicx would like to offer, help, advice and contacts to any company interested in setting up in the West Cork area. If any companies are interested in locating a plant in Ireland, we would like to invite you to contact Frank or Cáthál Wilson who will be delighted to help you set up in the area.





# BECOME A CERAMICX RE-SELLER

infrared heating partner of choice in over 65 countries



ARGENTINA		ARMENIA	AUSTRALIA	AUSTRIA	BELGIUM		
BOSNIA - HERZEGOVINA	BRAZIL	BULGARIA	CAMEROON	CHINA	COLOMBIA	COSTA RICA	CROATIA
CYPRUS	CZECH REPUBLIC	DENMARK	EGYPT	ESTONIA	FINLAND	FRANCE	GERMANY
GREECE	GUATEMALA	HAITI	HONG KONG	HUNGARY	ICELAND	INDIA	IRAN
IRELAND	ISRAEL	ITALY	JAPAN	LATVIA	LEBANON	LITHUANIA	MALAYSIA
MEXICO	NETHERLANDS	NEW ZEALAND	NORWAY	OMAN	PAKISTAN	PERÚ	POLAND
PORTUGAL	ROMANIA	RUSSIA	SAUDI ARABIA	SERBIA	SINGAPORE	SLOVAKIA	SLOVENIA
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# Talk to us today about your infrared heating needs.



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## QUARTZ ELEMENTS

Medium wave emitters

## QUARTZ TUNGSTEN ELEMENTS

Fast Medium wave emitters

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Short wave emitters  
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## ACCESSORIES

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all standard stock items available online, goods despatched next day, competitive delivery rates.

For all non standard items contact [sales@ceramicx.com](mailto:sales@ceramicx.com)



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