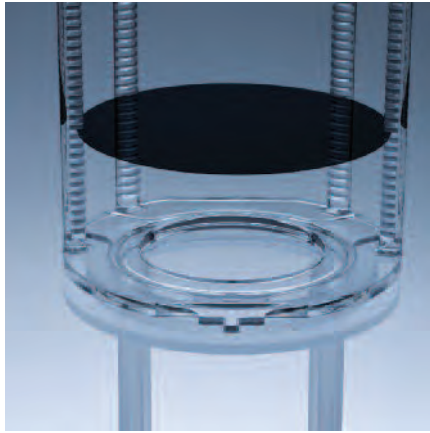


DELIVERING OUR
CUSTOMERS' EXPECTATIONS





DELIVERING OUR CUSTOMERS' EXPECTATIONS



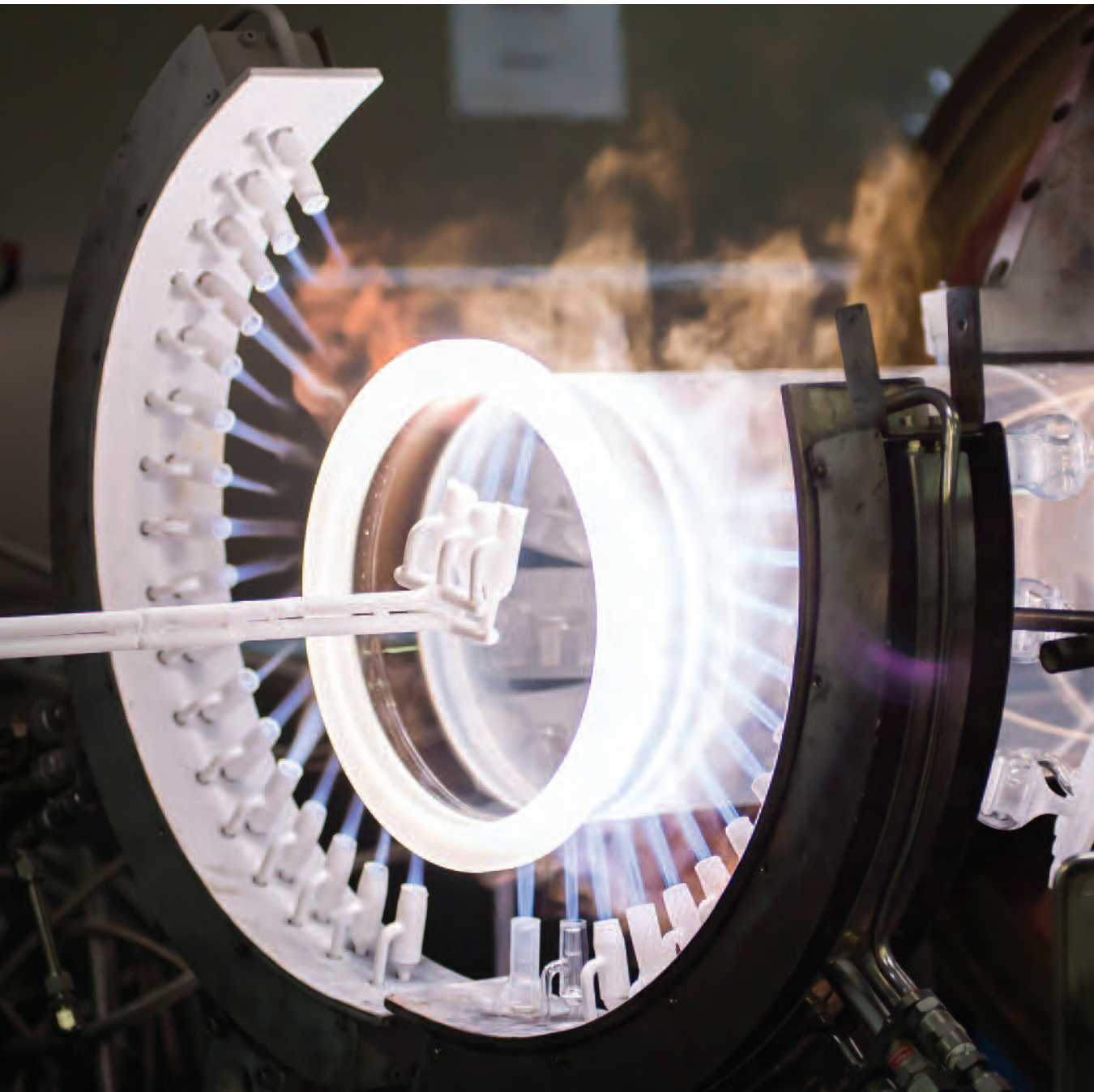
QUARTZ FABRICATION



THERMOCOUPLES



CERAMICS



SUPPLYING A DIVERSE RANGE OF INDUSTRIES

- Semiconductor
- Photovoltaic (Solar)
- MOVCD
- Optical Fibre
- Defence
- UV Water Treatment
- UV Lighting & Industrial Applications
- Furnace Manufacturing
- Laser
- Aerospace
- Medical
- Oil and Gas
- R&D
- Education
- Photonics
- Heat Processing



OUR MANUFACTURING PRIORITIES

EXCELLENCE, SUSTAINABLE VALUE, CORPORATE RESPONSIBILITY



Quartztec Europe is without doubt one of the world leaders in providing manufactured solutions through fused quartz and ceramic products. Our staff are highly skilled in Customer Service, Technical and Engineering Support and Manufacturing, and are dedicated to giving our customers and potential customers the best possible experience, always striving to deliver well above their expectations.

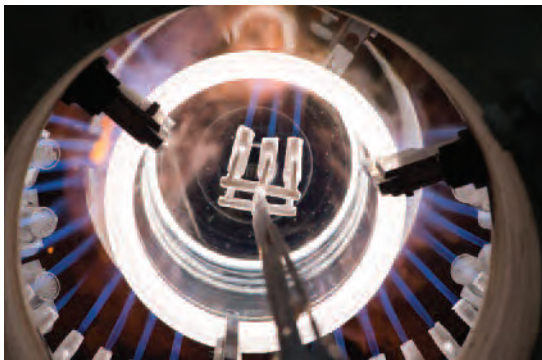
Call it inspiration, obsession or just interest, we are passionate about our business and especially our customers and how we can help them, and are proud to have won so many industry and customer awards over the years.

OUR CAPABILITIES

MANY AND DIVERSE

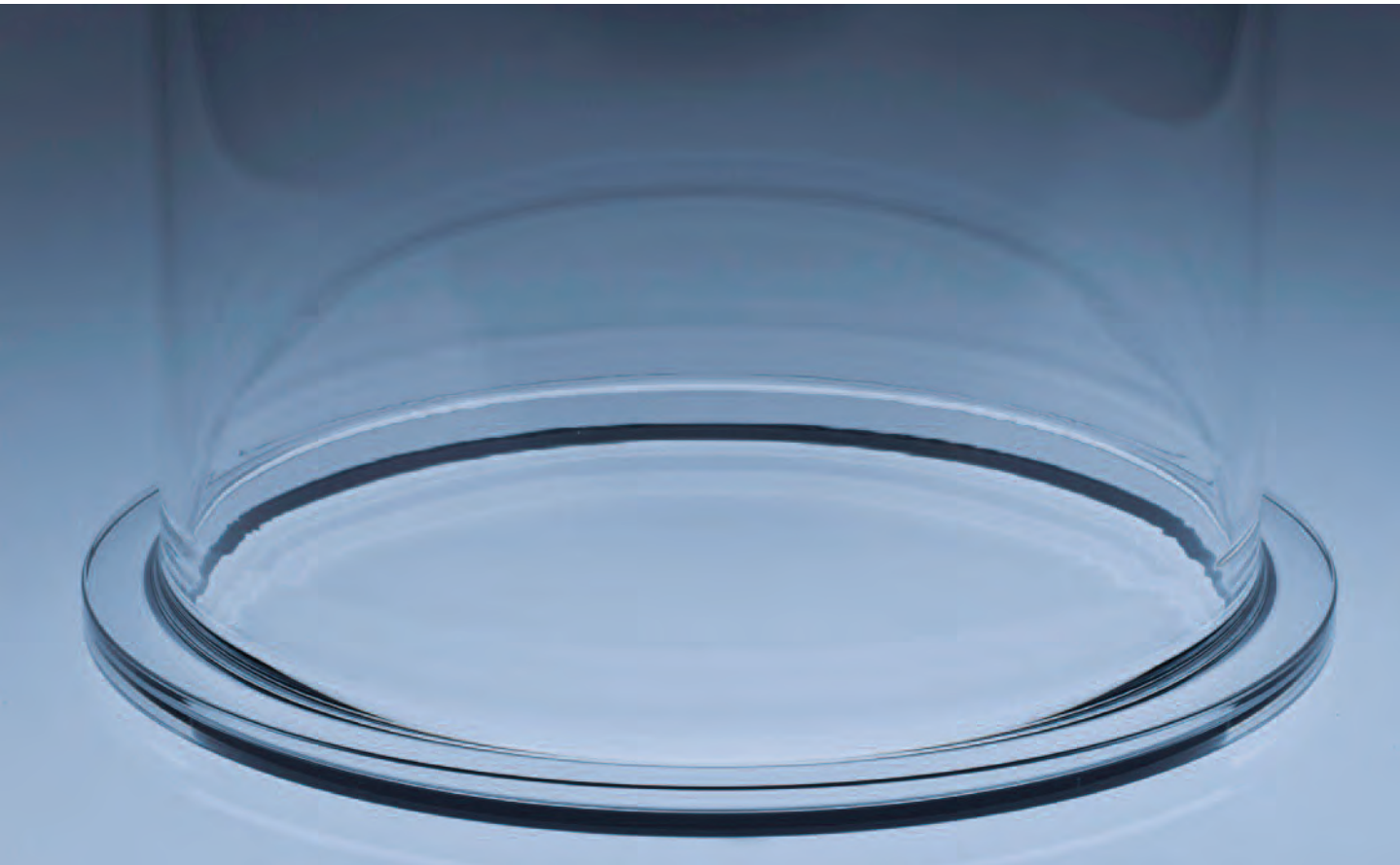
Capabilities include:

- MOCVD components
- CVD components
- CVD and Thermal diffusion tubes up to 500mm diameter
- Vertical and Horizontal tool parts
- Single wafer process Bell Jars and accessories
- Clamping, Splutter, Shadow, Focus Rings
- Boats
- Carriers
- Pedestals
- Single wafer parts for most OEMs for dry etch metallization and implant systems
- Robot blades
- Wet etch and pre-diffusion clean acid tanks and peripherals
- Plasma etch chambers and accompanying Quartz parts
- Plasma tubes and torches
- UV application components
- Fibre optic components
- Thermal sensor sheaths
- Analytical and medical components
- Defence components
- Automotive components
- Aerospace components
- Gas Distribution plates (shower heads)
- Optical plates, windows and accessories
- Small batch including one off R&D parts



OUR SKILLS AND INTEGRITY

DELIVERING OUR CUSTOMERS' EXPECTATIONS



Quartz Fabrication

Quartztec Europe has the expertise to produce some of the most advanced fabricated Quartzware used in industry today.

- We currently supply products worldwide to some of the largest Semi and Solar producers and have many years of experience in producing high quality furnace, etch and related parts for wafer fabrication processes, including MOCVD and CVD systems.
- With a staff of 42, 90% of our manufacturing workforce are Heraeus trained, so their manufacturing skills are without doubt some of the best to be found worldwide.
- We have an extensive apprentice training program in place to sustain and grow our manufacturing capability.
- Our advanced CNC machine shop can manufacture components to extremely tight tolerances if required.
- Within our class 1000 clean room, we can offer our customers the option of triple packaged goods which are ready to ship to line.

Quartz Component Repairs and Cleaning

Quartztec Europe offers a comprehensive quartz component repair and cleaning service, and has in place strict measures to prevent cross contamination at all times. This service is carried out on all manner of components, with the aim of longer longevity of the product and to bring down the cost of ownership to our customers. These parts then enter our final QA inspection protocol and can be inspected to extremely high tolerances if needed.



INTEGRATING AND MANUFACTURING

PRECISION RESULTS FOR OUR CUSTOMERS



Advanced Ceramics and CVD Coated Ceramics

Quartztec Europe has an extensive product range made from oxide and non-oxide ceramic materials. In many fields of manufacturing today high purity ceramics have already established themselves as the material of choice. Their excellent properties including chemical, thermal and mechanical, make many applications possible that cannot be realised with other materials.

Wherever a high degree of purity, chemical resiliency and temperature resistance are demanded, manufacturing and process solutions can be found with Quartztec Europe technical ceramics.

When you purchase ceramic products from Quartztec Europe you are assured that the materials are of the highest quality, ensuring that the material performs effectively in their final application.

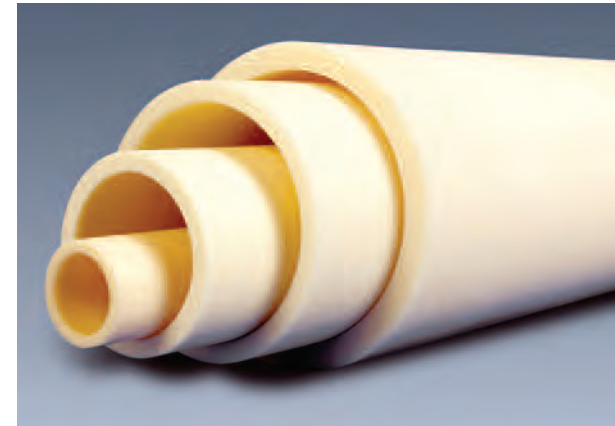
Quartztec Europe currently supplies a huge array of ceramic types into aerospace, semiconductor, photovoltaic, electronics, automotive, thermal processing, industrial equipment, defence, security, oil and gas, renewable energy and education.

Technical ceramic range includes:

- Al_2O_3 Alumina purities ranging from 60% up to 99.8%
- Recrystallised Alumina
- Silicon Carbide (SiC) various grades
- Silicon Nitride (Si_3N_4) various grades
- Sialon ceramic various grades
- Boron Nitride various grades
- Macor® Machinable glass ceramic
- Mullite various grades
- Zirconia ZrO_2 various grades

Ceramic product range includes:

- Protection tubes
- Insulators
- Radiant tubes
- Support tubes
- Beams
- Profiles,
- Customer specific parts
- CNC parts to specific customer's drawings



LEADING THE WAY

IN TEMPERATURE SENSOR TECHNOLOGY



Thermocouples and Spikes

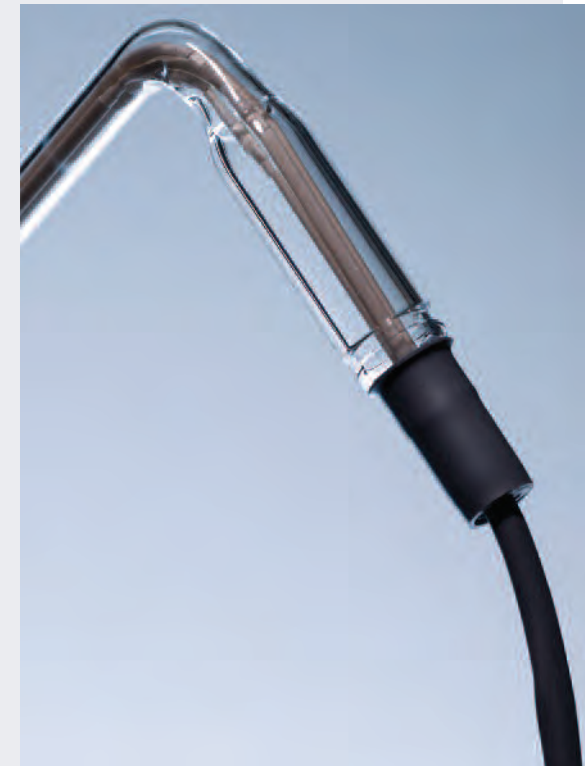
Quartztec Europe provides our customers with both profile and paddle thermocouples as well as spikes. Precious metal thermocouples are vital components used to measure temperature in diffusion and CVD tools manufactured by OEMs. Calibrated thermocouples are used in conjunction with spikes for furnace characterisation and control.

Our extremely high quality and accurate calibration helps to reduce downtime in your processing applications, only using ultra-pure premium grade wire supplied by either Heraeus or Johnson Matthey, tighter temperature control and lower deviation between manufactured batches, which in turn helps you to maintain a higher repeatability rate.

Our calibration system is traceable to N.I.S.T (National Institute of Standards and Technology) NPL/NBS and UKAS (United Kingdom Accreditation Service).

Why Choose Quartztec Europe thermocouples and spikes?

- High purity pre-calibrated wire which can achieve a tolerance of $\pm 0.5^{\circ}\text{C}$ at 1000°C
- Thermocouples guaranteed to $\pm 0.3\%$ of the standard used
- Calibrated data calculated over a range from 100°C to 1400°C with step size of 5°C (down to 1°C if required)
- Thermocouples provided with offsets from precision calibration system
- Purity of recrystallized Alumina ceramic used exceeding 99.7%
- System directly traceable to the National Institute of Standards & Technology (NIST) or the United Kingdom Accreditation Service (UKAS)
- Competitive pricing in the world market place with excellent service
- Holding stocks of materials and components for most of the industry standard thermocouples
- Provision of thermocouples within a very short lead-time





New Thermocouples

Profile | Paddle | Spike | Custom

Profile and Paddle Thermocouples are an essential component within a furnace process tube. Quartztec Europe manufacture thermocouples to fit every furnace type and requirement.

Spike Thermocouples are critical in the control function of the heating elements of a furnace. At Quartztec Europe we manufacture spikes to OEM specifications, helping you design custom spikes to meet specific temperature requirements.



Quartztec Europe manufactures a new fully calibrated thermocouple, built to your exact specification and complete with a full set of calibration data using semiconductor grade ultra-pure quartz glass and ultra-high purity ceramic insulators.

The thermocouple is constructed from new fully calibrated precious metal, built to your exact requirements and supplied with a full set of calibration data.

The temperature range and step intervals of the calibration data can be supplied to your specific requirements.

EXCELLENT VALUE

EXCHANGE OR REPAIR



New for Old Exchange Scheme

On returning your old thermocouple or spikes to us, we strip them down and remove the precious metal which has a value. This value is deducted from your new thermocouple or spike price. If you wish you can exchange one type of thermocouple for another using our new for old exchange scheme.

All precious metal wire is replaced with new, fully calibrated premium grade wire. The quartz glass sheath is replaced with a new semiconductor grade ultra-pure quartz glass sheath manufactured in-house. The ceramics are replaced with new, ultra high purity grade ceramic insulators, and the thermocouple is fully calibrated and supplied with a full set of calibration data of your choice.



Repair and Recalibration Scheme

On receipt of your old returned thermocouple or spike, we carry out a full evaluation checking for breakage, contamination and electrical connectivity failure. After our rigorous inspection we rebuild the thermocouple or spike using new components as required.

In order to achieve the degree of extreme high accuracy and repeatability which you expect for your business, all repaired thermocouples are recalibrated to our master referencing thermocouples, giving us extremely accurate data points on all junctions. Our master reference thermocouple's are referenced in accordance with N.I.S.T and UKAS and also available is a full set of calibration data of your choice.

THE CORE OF OUR BUSINESS

CUSTOMER SATISFACTION AND QUALITY



Quartztec Europe's quality policy is to attain and sustain world-class performance across every aspect of our business.

To maintain our high quality standards, real time MRP, which diagnoses customer relationship management (CRM) efforts, continually monitor and aim to improve our manufacturing cycle-time, giving our QA team data to determine route-cause analysis which in turn is used to drive continuous improvement within the company.

Real time data is constantly monitored to enhance productivity, reduce costs and improve overall quality. 'Best Known Methods' (BKMs) which are propagated across all our departments to standardise methods and enhance product consistency, have always been adopted. Our quality assurance specialists work relentlessly to maintain and develop our quality systems throughout all our business activities.



OUR INTELLECTUAL

ASPIRATIONS FOR SUCCESS

Our Aspirations for Success

Business Goal

To get it right first time, every time and strive to exceed customer expectations whenever possible.

Business Principles

Quality derives from a staff commitment to service and deliver excellence. This is stated as business principles:

- **Customer Focus**
Customer requirements come first. Quality begins and ends with the customer striving to always satisfy their needs. This is reflected in our flexibility - both as individuals and as a company.
- **Relationships**
Building mutually beneficial relationships with customers, agents and suppliers.
- **Innovation**
Searching for cost down design and supply first class products and services.
- **Teamwork**
Employees working together as a team to satisfy our customers.
- **Process Emphasis**
Focussing our Employees on practical processes to ensure consistent results.
- **Continual Improvement**
Through management review of our Business Management System, continually improving business performance, processes, products and services.
- **Employee Development**
Through active mentoring, create a culture where staff have the skills and are empowered to take responsibility for the results of their actions, contributing to the success of the Company.



CONTACT US

OR VISIT OUR WEBSITE AT WWW.QUARTZTEC-EUROPE.COM



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