simply high temperature technology

HIGH TEMPERATURE METALLIC-CERAMIC PRODUCTS, COMPONENTS AND SYSTEMS FOR ELECTRIC- AND COMBUSTION-HEATED FURNACES

660 °C – 1800 °C

HEATING | INSULATION | MEASURING

Aachen, 28.01.2016, Campus der RWTH Aachen
Kooperations- und Informationsveranstaltung zu grenzüberschreitenden markt- und industrieorientierten Projektpartnerschaften
SCHUPP® Ceramics is an established specialist for high temperature technology. Our family-owned company has been developing, producing and marketing high-quality metallic-ceramic solutions for sintering, firing, melting and heat treatment since 1996.

Whether in combustion- or electric-heated industrial and laboratory furnaces, our products, components and systems work reliably at temperatures of 660 °C to 1800 °C.

From approved standard products for high-precision firing process control to individual, custom-made products for electrical heating or thermal insulation – we provide standard and tailor-made solutions for industrial applications, production and research for customers around the world.
Our international team of 50 employees are focused on assisting more than 900 customers worldwide.

Trust, honesty and the will to make a difference define how we establish and maintain successful partnerships.

In keeping with the principle *adding value by valuing others*, we cultivate our relationships with customers, production and research partners and employees. Similarly, it is understood that we handle materials and energy as responsibly and sparingly as possible.

Your success and your satisfaction provide us with motivation, passion and impetus.
From Product to System Supplier

One Source

- Electric Heating (MoSi$_2$)
- Thermal Insulation (PCW)
- Furnace Linings (MoSi$_2$ & PCW)
- Process Temperature Control Rings (PTCR)
- Kiln Furniture
Main focused application industries

**SINTERING & FIRING**
- Furnace & Kiln Manufacturer
- Technical Ceramics
- Dental Technology
- CIM
- MIM
- Bioceramics
- Electronic Passive Components
- Catalyst Honeycombs, DPF Filter Ceramics Technology & Sensors
- Soft & Hard Ferrites/Magnets
- Phosphorescent Pigments
- ITO Targets
- SOFC
- Batteries (Li & NaS)
- Luxury Goods
- Structural Ceramics
- Abrasives/Grinding Wheels (Al₂O₃ & SiC)
- Ceramic Tableware/Porcelain
- Refractory Materials
- Gas Turbine Technology
- Ceramic Powders
- Ceramic Raw Materials
- Sensor Technology
- HIP Technology

**MELTING**
- Furnace Manufacturer
- Glass Ceramics
- Crystal Glass
- Borosilicate & Quartz Glass
- Jewellery Glass
- Crystal Growth Technology (Sapphire)
- Optical Glass Filaments
- Precious Metals
- Refractory Metals
- Super Metals
- Photovoltaic & Semiconductor (Si)

**HEAT TREATMENT**
- Furnace Manufacturer
- Semiconductor Industry (Si & SiC)
- Diffusion Furnaces/CVD
- Forging Furnaces
- Sheet Steel & Steel-Mills
- Press Hardening
- Surface Hardening
- Gems (Sapphire & Rubies)
- Synthetic Crystals
- SiC-Technology
- Petrochemical Furnaces (Ethylene/Cracker)
- Turbine Technology (Aircraft Industry)
- Carbon Technology
- Elemental Analysis
- Laboratory Gas Technology

**MATERIAL R&D** (Metallic/Ceramic/Glass)
- Technical Universities
- Research Institutes & Facilities
- Laboratories & Testing Institutes

**ENGINEERING**
- Module Manufacturer for Furnace Lining
- Refractories Technology
- Manufacturer of Insulation Shapes, Milled Parts & High Temperature Paper/Boards
- Trading of High Temperature Components
- Hot Gas Filtration
- Domestic Appliance
- Heating Boilers
- Fire Protection
### Systems, Components and Products

<table>
<thead>
<tr>
<th>MolyCom®</th>
<th>MolyTec &amp; UltraVac</th>
<th>Fibermax®</th>
<th>PTCR</th>
<th>UltraSetter</th>
<th>FiberPlast</th>
</tr>
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<tr>
<td><img src="image1" alt="MolyCom" /></td>
<td><img src="image2" alt="MolyTec UltraVac" /></td>
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<td><img src="image5" alt="UltraSetter" /></td>
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</table>
Electric Heating - MolyCom® (MoSi₂)

Heating elements
Industrial Standard & HIGH PURITY

MolyCom®-Ultra 1700
MolyCom®-Ultra 1800

MolyCom®-Hyper 1800
MolyCom®-Hyper 1800SC
MolyCom®-Hyper 1800AP
Electric Heating – MolyTec (MoSi$_2$ + PCW)

**Special Glass Industry**

Melting Furnaces (lead crystal glass & soda-lime glass) as roof heaters for feeder forehearth.

**Semiconductor Industry**

Vertical Diffusion Furnaces (Si-Wafers) Ø 300 to 450 mm & Horizontal Diffusion Furnaces (SiC-Wafers) up to Ø 200 mm.
Thermal Insulation – UltraBoard & UltraVac

UltraBoard
Insulation boards (PCW) up to 1800 °C.

Furnace Linings
Complete furnace linings according your individual requirements.

UltraVac
Insulation shapes and cylinders (PCW) up to 1800 °C.
Thermal Insulation – ITM-Fibermax®

**Wool**
Premium polycrystalline alumina wool (PCW) - chopped and unchopped.

**Needled Blankets**
Made from premium polycrystalline alumina wool (PCW) up to 1600 °C application temperature.

**Modules**
Different qualities available from 1500 °C to 1600 °C.
Process Temperature Control Rings – PTCR

6 ring types are available in a temperature range from 660 °C up to 1750 °C.

Process control and optimization, trouble shooting, yield improvement, improvement of product quality, quality assurance, reduction of inspection time and costs.
Available Ring Types & PTCR WEB APP

<table>
<thead>
<tr>
<th>Ring Type</th>
<th>Temperature Range</th>
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<tbody>
<tr>
<td>RTC-AQS</td>
<td>660 °C to 1000 °C</td>
</tr>
<tr>
<td>New Ring Type: UTH</td>
<td>660 °C to 900 °C</td>
</tr>
<tr>
<td>ETH/ETL</td>
<td>850 °C to 1100 °C</td>
</tr>
<tr>
<td>LTH/LTL</td>
<td>970 °C to 1250 °C</td>
</tr>
<tr>
<td>STH/STL</td>
<td>1130 °C to 1400 °C</td>
</tr>
<tr>
<td>MTH/MTL</td>
<td>1340 °C to 1520 °C</td>
</tr>
<tr>
<td>HTH/HTL</td>
<td>1450 °C to 1750 °C</td>
</tr>
</tbody>
</table>

The web-based application PTCR WEB APP is a smart tool and offers many advantages.

Reduce your efforts and save time by using it!
<table>
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<th>Kiln Furniture - UltraSetter</th>
<th>Ceramic Bonding - FiberPlast</th>
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<td>Fibrous Lightweight Ceramic Firing and Sintering Setters mainly made from $\text{Al}_2\text{O}_3$ and $\text{SiO}_2$ from 1250 °C to 1600 °C.</td>
<td>High Temperature Adhesives, Cements and Coatings up to 1750 °C.</td>
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</table>

- Excellent permeability.
- Dimensional accuracy.
- Excellent binder removability.
- Strong against thermal shock.
- Available in various sizes and shapes.
- Excellent workability.
- Ideal for automation firing processes.

- ready to use
- wet moldable for adhesive bonding, repair & maintenance
Simply High Temperature Technology. That’s what we stand for.

Consistent.
In all that we do.

Economic.
Invest in high-temp. systems.

Complex.
One source.

Close.
Personal, direct, in your vicinity.

Fast.
Safe packing & first-class delivery times.

Innovative.
Developing high temp. components.

Suitable.
Fast response & competitive prices.