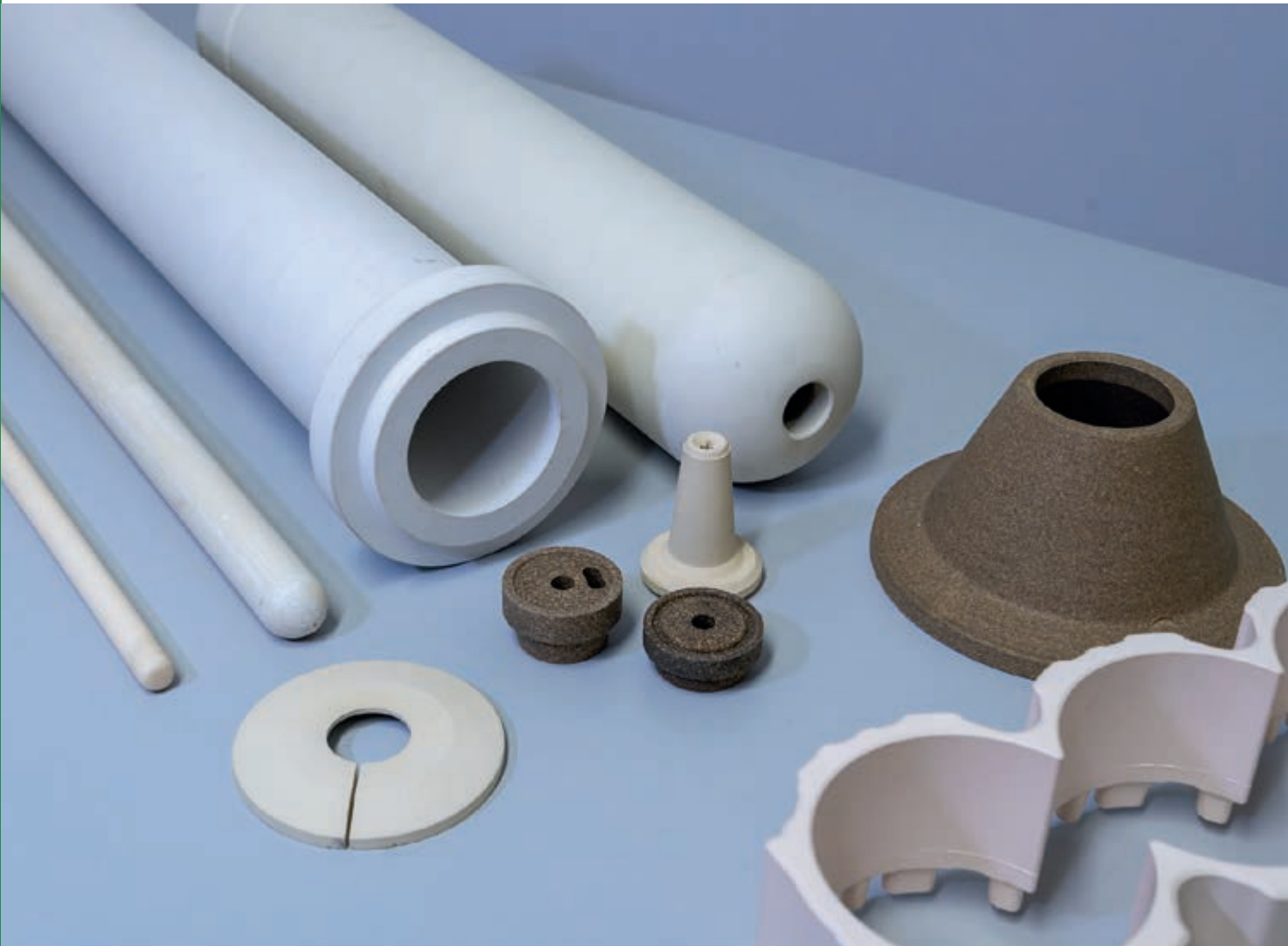


HIGH-PERFORMANCE CERAMICS FOR FOUNDRY APPLICATIONS

Risers | Dosing Components | Thermocouple Protection

- Easy integration into your casting processes
- Service life up to 2 years
- Low thermal expansion



OPTIMIZED CERAMIC SOLUTIONS

Due to their excellent thermal shock resistance, ceramic riser and dosing tubes are ideally suited for conveying molten aluminium in low-pressure die casting (LPDC) processes. Thermocouple protection tubes made of NSN and aluminium titanate provide a cost-effective alternative to the commonly used silicon nitride. In addition, innovative coating technologies can improve wettability, extend component service life, and reduce the risk of aluminium melt contamination.

Durability through premium material quality

Materials: ALTITE® (Al_2TiO_5), Silicon nitride (Si_3N_4)

Key Features:

- Microporous structure
- Low thermal expansion (dimensional stability)
- Non-wettable with aluminium
- Optimized for low-pressure die casting (LPDC)

Benefits: Reduced downtime and maintenance costs



Riser and
Dosing Tubes

Scan the QR code for technical benefits of ALTITE® (Al_2TiO_5)



High-performance tubes for non-ferrous metal melts

Materials: ALTITE® (Al_2TiO_5), Silicon nitride, NSN

Key Features:

- Exceptional thermal shock resistance
- Low wettability (aluminium casting optimized)
- Low thermal conductivity for precise temperature control
- Minimal thermal expansion (reduced material stress)

Benefits: Extended service life and process stability in demanding applications



Thermocouple
Protection Tubes

In addition to standard sizes, we manufacture individual parts exactly according to your design specifications.

FOR MOLTEN METAL APPLICATIONS

Engineered for durability and precision

Materials: Porous Cordierite

Key Features:

- Low thermal expansion
- High heat resistance 1.000 °C / 1.200 °C
- Efficient heat transfer properties

Benefits: Reliable performance and extended lifespan
Properties fit for investment casting



Pouring Cups,
Nozzles and Rings

Reliable high-performance heat transfer

Materials: Silicon nitride (Si_3N_4)

Key Features:

- High mechanical strength
- Excellent thermal conductivity
- Non-wettable by molten aluminium

Available Geometries:

- Standard heating tubes
- Plates and funnels
- Custom geometries

Benefits: Efficient heat transfer and design flexibility



Heating
Tubes

Precision form stability in every detail

Materials: Titanate-compound full ceramics

Key Features:

- Designed for HPDC-LC processes
- High dimensional accuracy and shape stability
- Produces complex internal contours
- High-temperature resistant
- Residue-free removal via UHP water cleaning

Benefits: High precision casting with UHP water core removal



Casting
Cores

BEYOND STANDARD PRODUCTS

From standard components to fully customized designs, Rauschert supports foundries and OEMs with high-performance ceramic solutions tailored to demanding molten metal processes.

Our materials and components are engineered to deliver long service life, high thermal stability, and consistent performance in aluminium casting environments, even under extreme thermal shock and high-cycle conditions.

WHERE OUR SOLUTIONS CREATE VALUE

- Low-pressure die casting (LPDC) of aluminium components
- High-pressure die casting with complex internal geometries
- Temperature measurement and process monitoring in molten aluminium
- High-wear, high-temperature foundry environments
- Cost-sensitive alternatives to conventional silicon nitride solutions

FROM STANDARD TO CUSTOM

We combine decades of ceramic expertise with application-specific engineering to deliver solutions that fit seamlessly into your process:

- In-house material development (oxide, non-oxide and silicate ceramics)
- Custom geometries manufactured according to your design specifications
- Design optimization for improved lifetime and process reliability
- Coating technologies to enhance wettability, wear resistance and chemical protection
- New part manufacturing as well as repair and refurbishment solutions

MATERIAL & TECHNOLOGY EXPERTISE

Material Portfolio: Oxide, non-oxide, and silicate ceramics developed and manufactured in-house

Extended Manufacturing Capabilities: Complete process chain from development to component manufacturing and engineering with extensive foundry industry expertise

Coating Technologies:

- Thermal spray processes with precision finishing and sealing
- Functional coatings: corrosion/wear resistance, chemical protection
- PFAS-free, hard chrome alternatives
- New parts and repair applications

**DO YOU HAVE A CHALLENGE?
YOUR CHALLENGE IS OUR DRIVE – GET IN TOUCH NOW TO FIND A SOLUTION!**

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Subject to errors and alterations. The information in this document only contains general descriptions of the technical options available and performance features. We will be pleased to submit you a personal offer.