

## BEST PRACTICE

### USE OF ZYAROCK™ SLEEVES

- The fused silica material has an extremely low expansion coefficient and far from the values of metallic materials. This feature must be considered for the design of a final assembly of a fused silica sleeve with metal parts. This applies to the thermal conditions at heating, cooling and during use.
- The fused silica material has a higher mechanical resistance in compression compared to the ones in flexion or traction. Designs or conditions of use of our parts should favour this characteristic.
- No local constraint on the fused silica sleeve is allowed because they can generate crack or breakage of the piece. This requires precautions in the quality of the contacts between the different parts.
- No mechanical or thermo mechanical constraint beyond the specification is allowed on of the fused silica material as including a factor of safety of a rotating part during long periods of use.
- Stresses generated by thermal gradients can be of a much greater magnitude than pure mechanical stresses. This must be taken into account.
- No mechanical shock is allowed to the assembly, installation, use or disassembly of the fused silica sleeve at risk of breakage or deterioration of the piece.
- The piece must be dried prior to the installation in the furnace.
- The ceramic sleeve is made of a porous material capable of absorbing liquids or partially viscous materials. Depending on the chemical nature of the material in contact, irreparable piece pollution can occur. It is essential to avoid contact with liquid, grease that could leave metallic or organic residues, alkaline or alkaline-earth materials that could cause crystallization of the fused silica material at high temperature.
- Consequently of the point above, the operators handling and touching the ceramic sleeve must wear clean gloves, made of white cotton without coloured parts, or else latex or nitrile gloves at room temperature. All other handling equipment such as straps must be absolutely clean prior to any contact with the ceramic sleeve.
- The storage conditions must respect the points noted above. It is recommended to keep the product in its original packaging and to protect the piece during temporary storage.
- Any modification of the sleeve and its consequences are under the sole responsibility of the customer or the one that will apply the modification.