

# QUALITY MANUFACTURE CERAMICS

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### About us

QMC Manufacture Ceramics





## Main products

- Roof tile orifice units
- Brick orifice units
- Ceramic pistons
- Thread guide
- Ceramic insulators
- Laboratory crucibles
- Slip ring
- Ceramic orientation bolts for welding
- Glazed ceramic products
- Other ceramics



Roof tile orifice units



Brick orifice units



Thread guide



Other ceramics





#### Technology and skills

- Computer-aided design (CAD)
- CNC milling
- Manufacturing quality and innovative products
- Full metal-work background
- Dominant role in the Hungarian brick and tile orifice units production

#### Selection of raw materials during the production

Aluminium oxide

- Oxide content: 99,7%
- Density: 3,9g/cm3
- Ra: 0,8-1 µm

ZTA (aluminium oxide, zircon oxide)

- 80% aluminium oxide + 20% zircon oxide
- Density: 4,2g/cm3
- Ra: 0,6-0,8 µm

Zircon oxide

- YZ yttrium-stabilized zircon
- MZ magnesium-stabilized zircon
- Density: 5,8g/cm3
- Ra: 0,2-0,4 µm





#### Steps of oxide ceramic pad production

- We handle every portion of materials identified during the production and we follow every product with an identifying slab until handing over to the customer
- This also ensures the reproducibility of the orifice unit
- The pre-product is produced with isostatic pressing on 1500 bar pressure
- Thereafter we form the shape with CNC machine
- Sintering on 1700 °C (3092 F) with a 48 hours automatic regulated cycle
- Post-processing with diamond tools
- Polishing the surface of the orifice unit with diamond paste for excellent sliding. Surface unevenness: Ra- 0,5-1 μn

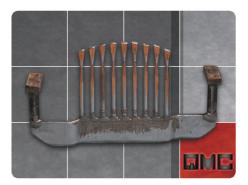




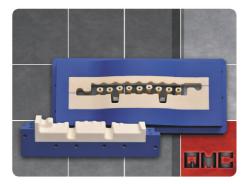
### Change to ceramic tools in practice

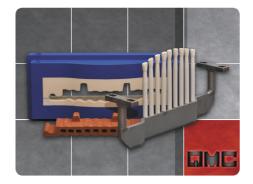
• Estimation and documentation of existing tools





- Adaption of requirements for the new-construction tools
- CAD planning
- Tool experiments formation of permanent construction
- Getting tools running
- Refinement of formed construction with the co-operation of factory experts









#### **Benefits**

- Significant increase of the lifespan of the tools through the highgrade wear resistance
- Remarkable sliding
- Fast and flexible modifiability of the tool construction by CAD planning and CNC milling
- Ensures optimal tile runoff
- The usage of the brake can be largely lessened
- The intake significantly decreases





#### **References in Hungary**

CREATON Hungary Kft. TONDACH Magyarország Zrt. WIENERBERGER Téglaipari zRt. LEIER Hungária Kft. MÁLYI Tégla Kft. BERÉNYI Tégla Téglaipari Kft. HAJDÚ Tégla Kft. EGRI Téglagyár Kft.





#### International references

England Hallamshire Engineering Services Ltd.

Singapur Ceratronics Trading



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