Mixing Technology for Refractory Materials

- **Shaped products**
  - brick press bodies of any kind
  - bodies for insulating firebricks
  - kiln furniture press bodies
  - bodies for isostatic pressing
  - bodies for ceramic filters

- **Unshaped products**
  - dry mixes (e.g., castables)
  - plastic bodies
  - ramming mixes
  - mixing of castables for prefabricated parts
  - mortar and putties

**The unique working principle**

- Rotating mixing pan for material transport
- Variable-speed mixing tool, slow to fast for mixing, kneading etc.
- Separation between material transport and the mixing process
  This allows the speed of the mixing tool (and thus the power input into the mix) to be varied within wide limits.

**This working principle offers the following options:**

- The mixing tool can be run variably, at low or high speed. The input of power into the mix can thus be controlled specifically.
- High tool speeds allow
  - fibers (synthetic, ceramic, steel) to be disintegrated optimally
  - very small amounts of additives to be mixed-in optimally
- Medium tool speeds allow high-quality mixtures to be produced
- Low tool speeds allow lightweight aggregates to be mixed-in gently

**Further advantages:**

- Mixing processes and mixing speeds can be adjusted to suit the respective formula
- The mixer is suitable for both mixing and kneading. This allows to also prepare silica brick press bodies without muller and to produce plastic/extrusible bodies without kneader.
- The mixer is suitable for mixing and granulating. This provides a cost-effective solution for the production of granules (for isostatic presses or alternatively to thermal granulation)
- Operation under protective gas / redrying of granules and bodies under vacuum is possible
- Dry mixers can be supplied with an automatic pneumatic interior cleaning system
- The mixer can be heated
- Mix temperatures of up to 250°C are possible
- Available size from 1 L

**EIRICH customers tell from experience:**

- Mixing result and mixing quality remain unchanged even if only partial quantities are mixed, down to 30% of the nominal capacity
- Dry mixing: Distinctly fewer repairs due to wear compared to cylindrical mixers
- Substantially less water is required for manufacturing prefabricated components, less porosity

Top-name manufacturers around the world work with EIRICH mixing technology. We would be glad to provide references on request. EIRICH is a research partner for universities. Put us to the test. We would be glad to tell you more.